

Universities fear estimates too low for inflation in next year's grants

by Frances Gibb

Fears are mounting that the Government's assumptions about the amount allowed for inflation in the universities' recurrent grant for next year will be dangerously low. Sir John Habakkuk, chairman of the Committee of Vice-Chancellors and Principals, has warned that if the assumption that salaries will increase by 5 per cent and prices by 11 per cent is wrong, universities will suffer "further serious damage" unless they receive more money.

Even if the assumption is correct, the shortfall will be greater than the 1 per cent announced by the Government because of universities' "inescapable commitments", he said.

Universities have estimated an average shortfall in the grant next year of between 3 and 4 per cent. For some the shortfall will be as much as 6 or 7 per cent. The Association of University Teachers has said that if salaries increase by 10

per cent, the shortfall could be as high as 8 per cent.

In a statement this week on its finances next year, Liverpool University has said it expects to be £1,200,000 short of estimated expenditure in 1977-78. Savings achieved so far could reduce this to £700,000, but further economies next year, in the form of freezing posts, could reduce it to about £300,000, which would have to be found from the university's reserves.

No more than one half of all posts falling vacant could be frozen, Liverpool said, if serious and irreparable damage to teaching and research was to be avoided and the university's contribution to the community maintained.

The university warns that new academic developments are out of the question. The offering of new courses or changes in courses will involve additional outlay which only be achieved by withdrawing support from other areas, which are themselves already overstrained.

At Manchester the Vice-Chancellor, Sir Arthur Arncliffe, pointed out at a recent meeting of the university that the cut in next year's grant was on top of a cut of 15 per cent in the value of income per student over the past five years.

"I can only say that even with good management, continued economy, redeployment of resources and the full cooperation of our staff we walk an extremely dangerous financial tightrope", he said.

The university was determined to protect the interests of staff by avoiding redundancies and by meeting agreed pay settlements from the funds it had, he said.

Its income was about 7 per cent higher in cash terms than for 1976/77, from which it had to pay salaries and wages. It was difficult to assess exactly the value of the grant, but in real terms it was being cut at a time when the university's resources were over-stretched and student numbers were still rising.

SSRC proposes radically new studies of bureaucracy

by David Walker

The Social Science Research Council is planning a series of new initiatives in the study of the National Health Service, the workings of Whitehall, the nationalized industries, and local government. Three working parties have recently completed reports, which are now being circulated among academics for comment.

The council has already decided to establish a panel with a budget of £250,000 to provide grants for research on the health services. Applications are shortly to be invited from researchers and special favour will be given to teams working on multi-disciplinary projects.

Future initiatives include the setting up of a unit in Scotland to monitor local government reorganization; a continuing research into the relationship between permanent civil servants and politicians; giving local authority officers and politicians a bigger say in what research is done; and devoting more attention to the relationship of government and private industry.

The working parties were set up last year under the aegis of the SSRC's research initiatives board with the aim of identifying gaps in applied social science research. The panel on health and health policy, chaired by Professor Maurice Kogan

of Brunel University, was to consider the allocation of responsibility among the SSRC, the Department of Health, the Medical Research Council and other bodies.

Working groups on local government research and the study of central government, led, respectively, by Professor John Stewart of the Institute of Local Government Studies at Birmingham and Professor Frank Stacey of Nottingham University, were to determine SSRC research priorities in these areas.

Both these groups have recommended that permanent posts be set up by the SSRC to guide the study of government. Both emphasized the need for research that could escape the rigid departmental divisions of central and local government. The philosophy of corporate management by local authorities was said to detract the essence from single academic subjects.

The academic community's reaction to these initiatives—which includes a response by the SSRC's own single subject committees—will be a test of the more active policy pursued in recent years by the SSRC. The establishment of the research initiatives board was controversial and some social scientists fear that the SSRC may play too controlling a role in dispensing grants.



Toppling crane kills sweeper at poly

A 150-foot crane crashed on to the roof of Wolverhampton Polytechnic on Monday, its toppling killing a road sweeper below. The crane overbalanced as it was being dismantled after being used on Wolverhampton's new Civic Centre opposite the college.

Cardiff ponders 'appointments' inquiry

The council of University College, Cardiff, is to consider the need for an appointments inquiry into recent appointments which have given rise to claims that an "old boy network" exists.

At a meeting of the senate this week three members of council, including Dr William Bevan, the principal, called for a special meeting of the council to consider whether such an inquiry should be held. The meeting will take place next Wednesday.

The request follows the finding by students of a dossier of letters concerning two recent appointments of academic staff at the college. These showed that both teachers concerned, Professor A. T. Mathieson, who has been appointed director of

NUS demands more posts to meet medical student boom

by Clive Cookson

Britain's expanding output of medical students is on the point of outstripping the number of hospital jobs for new graduates, the National Union of Students warned this week.

Unless the Government takes immediate steps to create more pre-registration posts, medical students who have spent three years of the country £40,000 will be unable to practise as doctors, the NUS said. (The law requires all graduates to work in "pre-registration jobs" for a year before they are registered as qualified doctors.)

However, the NUS made it clear that, unlike the British Medical Association, it does not believe Britain is training too many new doctors. "There is a danger of medical students being used as a scapegoat to maintain the bargaining power of sections of the profession who are unwilling to face the real problems of medical career structure and the falling standard of patient care."

Indeed, the NUS wants medical school intake to expand to meet the Government's 4,100-a-year target, and wants a corresponding increase in pre-registration jobs.

This could be achieved, the union suggests, by including a much wider range of junior posts within the scope of pre-registration jobs. For example, geriatric, psychiatric and midwifery posts in hospitals, and work in health centres. At present pre-registration experience is normally

Geriatricians find fresh hope

Undergraduates in three medical schools in the British Isles received their formal instruction in geriatrics in 1975-76. The teaching time devoted to the speciality in the remaining 31 clinical schools varied from four to about 100 hours.

Mr Richard Wakeford, of the Centre for Medical Education, Dundee, who has spent three years in formal instruction in geriatrics in an acute bed was well regarded as a pioneer. Sir John felt the attitude of young people capable of a rounded recovery was disappointing.

Professor Sir Ferguson of Glasgow University, the geriatric professor, said there were still "side-tracked" views of medicine—where people live in houses that live in hospitals.

There was much discussion of the proper role of the geriatrician. Speakers felt the speciality attract more students if the medical care of the elderly was seen as a general physicians' and not as a super-specialist.

The most warmly applauded was given by a nurse who claimed the initial teaching of medical students for geriatrics was more important, by a long way, than the teaching of the "concealed prejudices of the staff".

Union to consider teacher forum

The new NATFHE plan also follows a decision by British polytechnics to establish the Polytechnics Council for the Education of Teachers. This will, the polytechnics say, initiate and contribute to the formulation of teacher education policies and participate in the discussion on matters of national concern in the field.

The latest DES attitude has been revealed in a confidential letter to Dr Edwin Korr, chairman of the Council for National Academic Awards and head of a working group established by the Advisory Committee on the Supply and Training of Teachers. It said that the proposed professional association would be accompanied by the setting up of centres of scholarship and professional expertise.

What the NATFHE is known to favour is the disbanding of ACSTT, the Government's Green Paper plan inevitably puts its future strength in doubt. Both the NATFHE, which has 70,000 members, and the 200,000-strong National Union of Teachers are anxious that serving

UGC sets deadline for Cardiff link-up

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The University Grants Committee has settled on the end of July as the deadline for the three university institutions in Cardiff to submit proposals for their joint development.

University College, Cardiff; the University of Wales Institute of Science and Technology; and the Welsh National School of Medicine have been asked to draw up an "outline growth plan" to eliminate unnecessary duplication and make the best economic use of existing facilities.

"Only on this basis can proposals for the commitment of additional resources be justified in the particular circumstances of Cardiff", the UGC says.

So far the word "merger" has not been mentioned, but the three principals have already discussed proposals for a joint library, and many lecturers feel that a move would inevitably be followed in the future by rationalization of departments.

It warns that divided responsibility for departments or for buildings or facilities could be a source of trouble, but that "some shared use of academic and physical resources would be essential if the best interests of the university were to be served".

The three principals have held two meetings since April under the chairmanship of Lord Justice Edmund Davies, pro-chancellor of the University of Wales. The next meeting is planned for July 1. Although the present proposals would have no implications for the structure of the University of Wales, fears are being expressed that if there was a merger in the future there would be one institution much larger than the other constituent colleges.

University College at present has about 4,500 students. The School of Medicine has about 640, and UWIST 2,700.

An article in the May issue of the Cardiff Association of University Teachers' newsletter, says "The UGC claims that it does not want to pressurize the Cardiff institutions or the University of Wales, but a remark in its report of the November visitation... suggests that it is not unaware of the inevitable institutional changes that financial pressure will bring about."

It is reasonable to conclude, therefore, that the UGC envisages in the not too distant future a University of Cardiff.

So far the three institutions have cautiously accepted the proposals as they stand. Mr F. Morris-Jones, dean of UWIST, said: "The UGC has argued cooperation from the economic point of view, and we all agree that there is a great deal we can do and have much to gain. But we in UWIST feel we have something to offer as a separate institution and want to stay that way."

There were many loyal greetings. Salford, where the Duke of Edinburgh is chancellor, wrote to say they were "sensible of the honour of the association" and Reading expressed its "humble duty". Lancaster spoke of its "deep gratitude" for the Queen's services. London and Essex also sent loyal messages.

At Leeds, Warwick, Surrey and London there were no official celebrations. At Bradford, the flag flew and the university had a holiday.

London to get media centre

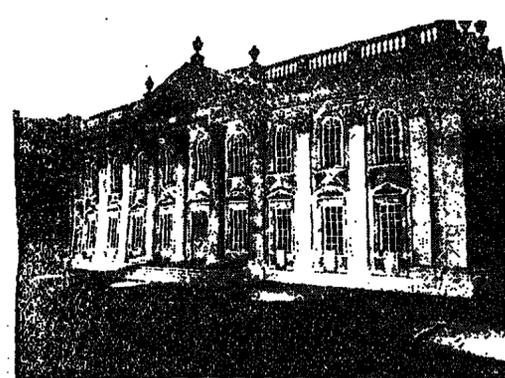
A centre for the study of the social aspects of mass media is being planned by Goldsmiths' College, London. It will be subsidized by the Home Office, trade unions and broadcasting bodies.

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It is hoped that, provided sufficient finance can be raised, the centre will open at the beginning of next year, initially under the guidance of a full-time director and deputy director.

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Exams before jubilee

by Judith Judd

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There were, however, exceptions. Cambridge was one of the leaders of the loyal field with the postponement of examinations and a request from the vice-chancellor that academic dress should be worn in the streets from dawn to dusk.

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Manchester, too, provided a touch of extravagance with a dinner for 75 members of the senior common room at the price of £6.90 a head and with a suitably majestic menu. Consumed salmon Elizabeth I, fillet of beef Henry IV and ye old England trifle.

In Reading they said it with flowers. The university gardeners, who carried off a gold medal at the Chelsea Flower Show, devised a flower bed incorporating the royal crown and the Berkshire rose.

Union to consider teacher forum

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The scheme, proposed within the union's own ranks, has been discussed informally by the NATFHE in the past. But following its inclusion in the confidential agenda of a closed executive meeting after the union's annual conference last week the plan will now receive formal consideration.

It comes in the wake of a disclosure that the Department of Education and Science is to propose in the Green Paper later this month that a "broadly based professional association" to undertake curriculum study and development should be set up.



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Call for DES control over training

A unified department of education, science and training to prevent centres being started outside DES control was urged by the 400 delegates at the annual conference of the National Association of Teachers in Further and Higher Education this week.

In a debate on the plight of Britain's young unemployed, the conference attempted to lessen the growing involvement in training of the generously funded Manpower Services Commission and its agencies, voted for the second year running to establish one unified government department.

The call, opposed by the union's executive who fear that the TUC will not welcome such a move, was successfully made after the conference had voted for an urgent government action programme of education, training, and job creation projects for the young unemployed.

Mr Bill Buckley, a member of the union's executive committee, told the conference that the number of unemployed young people aged under 25 had risen by 100 per cent between 1972 and 1976. The current year was the worst for youth unemployment since the war and every forecast showed it would worsen. By the end of autumn of 1978 there would be 350,000 young people without work and during the next five years the number was unlikely to fall below 100,000.

Branches 'should support abortion'

Local branches of the NATFHE should support a woman's "right to choose" on abortion and foster links with those organizations campaigning to maintain and extend existing facilities for abortion, the conference decided.

The gradual decline of the left

A statement on wages that it would take a medieval theologian to unravel was adopted by the National Association of Teachers in Further and Higher Education at Harrogate during a three-week conference. The conference also heard praise of further education in East Germany, toyed with the idea of a closed shop in the colleges, and bemoaned the fate of the young unemployed.

In three days of meetings in and around the spa town's hotels and conference rooms, the liveliest debate was, surprisingly, not about money, jobs, or interfering validating councils, but about abortion and women's rights. Much energy was expended before NATFHE adopted a position held for a long time, quite uncontroversially by the old technical teachers' association.

Shades of the former Association of Teachers in Technical Institutions gathered at the valedictory performance given by Tom Driver, who is retiring as general secretary of NATFHE. Flung over his shoulder and admiringly, he hectoring the audience in his basso profundo voice before sitting back to hear a string of tributes to his years of service to further education and to the trade union movement.

The message of the Association of Teachers in Colleges and Departments of Education and the ATTI from which NATFHE sprung is still in its early days, and sometimes the cracks showed. There was a slight feeling that the college of education members have diluted the association's politics. Officials are now said to be spending four-fifths of their time on college of education affairs while college teachers number only 9,000 of NATFHE's total membership of 70,000.

Seasoned conference observers did detect a continuing decline of left-wing influence within the association. A key motion was that opposing the very idea of a social contract. It was defeated by about 170 votes to 150, and that figure gives a fairly accurate guide to the numerical strength of the active left wing in the last years of the ATTI. It was proportionately higher.

Delay sought for further TEC and BEC courses

The technician and business education councils, which are currently producing new courses for 400,000 further and higher education students, came under heated criticism from delegates at the conference.

training for all young people to the age of 19. NATFHE decided that the Manpower Services Commission and its offshoots were not to be the means towards this end. In the background is the broad left view that there can be no alignment of education and training until society changes and the jobs for which young people are being trained are redefined.

Unemployment is naturally an emotive issue. Mr Derek Weitzel, a past president, spoke movingly of his work at a social centre for young jobless in Coventry. The line between education and social work blurred. Immediately after him, however, one heard the voice of hard economic analysis: unemployment was the deliberate creation of the Labour Government. Mr Jeff Carter, of the Outer London region, spoke of tainted funds from the Training Services Agency and regretted "education opportunism" on the part of his fellow teachers who are spreading job creation and skills money.

But if the 16-19 area needed rationalization, NATFHE found the business and technician education councils to be wanting in their role as systematizers of the diplomas and certificates provided for craft training by young people. The TEC and BEC debate became a litany of complaint about additional time spent on administration, unaccountability, interference.

One objection to conference feeling is how many pieces of paper are thrust into delegates' hands as they enter the conference hall. This year at Harrogate it was indicative that only the "rank and file" organization of left-wing teachers and the pro and anti-abortionists made much of a showing. On the conference floor Mr Malcolm Lee, a member of the executive and a former ATCDE activist, made a spirited attempt to have any discussion of abortion ruled out of order. It was not a subject, he said, which was relevant to the concerns of a teachers' trade union.

Women—who were fairly sparse among the delegates—replied, and an extensive commitment to women's rights was adopted. The motion substantiated NATFHE's claim to have one of the best records in the public service field for seeing to the interests of women members.

Apart from this, Harrogate was in a sense a passive conference. NATFHE was responding to the plinkings of the Government's policy on job creation, coming to terms with the fait accompli of TEC and BEC. It decided to follow the TUC majority vote, but gave ambiguous advice to its delegates to the TUC: not to strike out on incomes policy. NATFHE did not strike out on its own policy lines at Harrogate, but faced with reductions in educational spending, the college closures, and the general economic climate, that perhaps was to be expected.

The association still has much credit in the shape of left policies. The architect of much of them, Mr Driver, goes home as perhaps the brightest light of his years as general secretary, the Houghton pay settlement, still casts its glow over, and reveals how long even that relative degree of content about salaries will last is something for his successor to face.

Hendy urges closed shop

Closed shop agreements for college polytechnic lecturers were called for this week by Mr Jack Hendy, retiring president of the National Association of Teachers in Further and Higher Education.



Driver tells of 'unprecedented difficulties'

The reorganization of teacher education and the random in training have presented unprecedented difficulties, Mr Driver, the union's retiring general secretary, told the annual conference this week.

He maintained that no teachers' union had faced such a scale and the problems were not furthered by the rate of change.

Since 1969 the organization of teachers in further and higher education had changed in many ways. Membership of the NATFHE stood at 70,000 and a rapid Education Institute scheme could bring the figure to 82,000 later this year.

But he warned in a phrase of the conference that the union was not for complacency. He said 10 per cent of all teachers were the majority of poor teachers. A further 5,000 teachers would be recruited in the next academic year.

Restrictions on local government spending were now having a big impact on other areas of further education. "At a time when people are seeking to take advantage of further education resources are being cut and cuts in income are being made. We can all hope for an improvement but our immediate task is to fight against the cuts which are being proposed now."

Universities challenged over jaded courses

The ideal university would be a sort of outward bound school of the intellect, Professor Harold Perkin, of Lancaster University, told a conference at Sussex University last week.

"I would teach students to think for themselves, not for old fuddy-duddies like me, to solve new problems not old ones, to do new experiments not those done hundreds of times before, to invent new machines not design out-of-date ones—in other words, to be ready to cope with the unexpectedness of things, the Joker in the pack, the number you did not first think of", he said.

Professor Perkin was speaking at a day of discussion on "Education in crisis", which was designed to thrash out some of the issues behind the recent occupation of administrative buildings on the campus.

Speakers at the 400-strong meeting included Sir Denis Wilkinson, vice-chancellor of Sussex University, Mr Charles Clarke, president of the National Union of Students, and Mr Stuart MacLure, editor of the Times Educational Supplement.

Mr Charles Clarke, NUS president, sounded the alarm about the effects of increased tuition fees which, he said, could only reinforce the bastions of privilege by ensuring that only the wealthiest would be able to attend university.

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Accountancy still leading field in bleak jobs market

Accountancy still leads the field in the demand for graduates, according to the annual report of Mr C. A. Slipper, Newcastle University's chief careers adviser.

Mrs Williams calls for changes in vetting foreign scholars

Mrs Williams, Secretary of State for Education and Science, has questioned the traditional practice of allowing foreign scholars planning to study in Britain to be selected for awards by their own Governments.

Speaking at the London University Institute of Education in support of the establishment of a Department of Education and Science, she said that the present system could lead to wasted places when students not properly vetted are allowed to enter the country.

Mrs Williams said that Britain had a responsibility for refugees, their education and welfare. But this responsibility had to be put on a "better and permanent" footing. International agreements among countries willing to take refugees were needed.

All teachers should be able to teach in a multi-cultural world, Britain's education system did not reflect the multi-racial society in which people lived although it was conscious of the demands being made on it.

Certain projects have now started in interdisciplinary approaches to the teaching of international understanding, said Mrs Williams. Projects were underway within London University's School of Oriental and African Studies, and the Council for Education in World Citizenship and Education for Peace and Co-operation.

The Institute of Education has launched a public appeal to raise £150,000 to fund a chair.

Cabinet looks at £168m aid for unemployed

The Cabinet is currently debating the £168m package of proposals to help Britain's young unemployed outlined earlier this month in the Holland report and will give its verdict in a week's time, it has been revealed.

It is also considering a second unpublished report on the plight of unemployed young people aged 19 or more produced by the same Manpower Services Commission team. Mr Geoffrey Holland, head of planning at the MSC and chief architect of the report, told a London conference.

He issued strong warnings that the number of unemployed school-leavers was not expected to fall, even if the economy improved. At least 83 per cent of young people leaving school this year would have difficulty in finding jobs and the level of initial unemployment in this age group was expected to rise.

Unemployment among young people had risen every year for the past 10 years. None of the projections by the MSC had shown unemployment among young people falling below 100,000 in the next five years. The most pessimistic projection showed that the numbers could rise to 450,000 next year and stand at 350,000 in 1981.

The last qualified and less able young people had been hardest hit by unemployment. The new programme of action now under consideration by the Government should be designed to meet the personal needs of individual young people seeking permanent employment, said Mr Holland.

Both he and Mr Gerald Fowler, former Minister of State overseeing higher education, told the conference, organized by the Young Volunteer Force, that the new programme should link the world of education and work.

Mr Fowler said a coherent strategy was needed for employment, training and recurrent education. A possibility ignored by the Government's recent debates on education, he gave warning that the Holland report, while it should be welcomed, could lead to a situation where education was primarily for the better off and training for the poorer and less able school-leavers.

Referring to the rift between the work of the Department of Education and the generously funded agencies, including the MSC, of the Department of Employment, he said that education and training had to be brought together.

Correction: The London University membership of the National and Local Government Officers' Association is about 3,300, and not 23 as published in The Times (May 27).



Professor Paul Matthews, vice-chancellor of Bath University, last week opened the Craft Study Centre at Bath's Holburne of Mendips Museum. The centre, a joint venture between the university and trustees of the museum, contains a unique collection of twelfth-century pottery, woven and printed textiles, calligraphy, and embroidery.

Examine work needs—union

An investigation into the educational needs of school-leavers preparing to start work was suggested this week by the National Association of Teachers in Further and Higher Education.

In a properly funded objective manner, said the union.

There was little doubt that many school-leavers trying to find work at 16 were from lower levels of academic attainment as measured by the existing examination system. But this was not proof of a fall in academic standards, generally, but evidence of changes in the attitudes and aspirations of 16-year-olds with higher attainment levels.

The union added: "There has been a tendency for more young people to pursue higher education than in the past. This has led to a shortage of further education, training and educational services will need to combine. If the results indicate a need for reconsideration of the secondary school curriculum then this should also be undertaken."

Students switch campaign tactics: Oxford University Student Union, which has been given the right to circulate its own flyers with the official University Gazette, is presenting a petition to the Building Committee, a member of the General Purposes Committee, and one of the resources committee.

The suggested timetable is for the president of the students union to become a voting member of the Building Committee this year with the six nominated students attending committees as observers next year, with full voting rights in 1980. The joint petition, signed by the joint committee of senior and junior members would be abolished.

Correction: The London University membership of the National and Local Government Officers' Association is about 3,300, and not 23 as published in The Times (May 27).

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Handwritten note: 10/10/78

NOTICE BOARD

Chairs

Professor Robert Gray Shanks, at present holding a personal chair in clinical pharmacology at the Queen's University of Belfast, has been appointed to the Withy Chair of Therapeutics and pharmacology at the University.

Professor Derek Robinson, at present professor of medical physics at the University of Aix-Marseille, has been

Appointments

Belfast
Pro-Chancellor: Emeritus Professor Sir John Biggart (re-election for five years). Lecturers: Alan Lyness Bell (civil engineering); Mrs. Elizabeth McWhirter and Karen Trow (psychology); Guy Bonlan (agricultural and

Forthcoming events

"The Records of the British Motor Industry and their Preservation" a three-day conference organized by the politics and history department at Lancaster Polytechnic, will be held on June 27-29. Visiting lecturers will cover the sources of information, the physical care of records. Fee: £50 for residents; £37 for non-residents. Further particulars from the Short Courses Unit, Lancaster Polytechnic, Industrial Liaison Bureau, Priory Street, Coventry CV1 5EB.

Conferences on "The continuity of undergraduate, postgraduate, and continuing medical education and on innovations in Medical Education" have been organized by the Association

appointed to a chair of pure mathematics at the University of New South Wales. He will take up his position in early 1978.

Dr A. J. Smith, reader in geology at University College, London, has been appointed to the chair of geology at Bedford College, London, from October 1, 1977.

Dr J. J. Florentin has been awarded the title of professor of computer science in respect of his post at Birkbeck College, London. He has been awarded the title of professor of electrical and

food chemistry); Malcolm Wood and John Stannard (law); Gabriele Buffoni (Italian). Temporary lecturers: Mrs. Erine Harkness (public law); Gillian Avery (English). Part-time lecturer: Marie Kennedy (specialist problems of the young). Honorary lecturer: Mr Alan Nichols (physical education).

London

Title of reader: Dr F. J. Evans (electrical and electronic engineering, Queen Mary College).

Loughborough
William W. G. Salt (medical chemistry); Mr A. Booth (economic and social history); Mr M. J. B. Hall (economics); Dr J. E. Ward (engineering); Mrs M. R. Mathew (management accounting); Miss J. W. Taylor (social administration).

An exhibition of 70 paintings in the collection of Dr Robert Little which includes work by many artists from Scotland, England and abroad is being held until June 15 at the University of Edinburgh. The core of the collection is a series of early twentieth-century paintings by such artists as Sickert, Peploe and the Scottish colourists.

Nottingham University's Adult Education Summer School will be held from June 9-15. Courses will cover topics in adult education; the planning of training courses for part-time teachers in adult education; and industry and curriculum patterns. All inquiries to J. L. Parkes, department of adult education, University of Nottingham, 14-22 Shakespeare Street, Nottingham.

"Mathematics in oceanography" a conference organized by the Institute of Mathematics and its Applications, will be held on June 28-30 at the University of Bristol. Papers have been invited from Mrs. Penny Turnbull, administrative secretary, RMAE, department of psychiatry, Royal Edinburgh Hospital, Morningside Park, Edinburgh EH10 5JH.

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Universities

Leeds
Mining and Mineral Sciences—£1.7m from the SRC for a project on chemical and thermodynamic of metal extraction with chelating and carbon extractions under Dr M. M. Rice.

Leeds
Textile Industries—£4,070 from the SRC for a project on high-resolution studies of surface structure and structural heterogeneity in carbon fibres under Dr D. J. Johnson.

Leeds
Physiology—£1,450 from the SRC for research into lateral afferents in the dorsal and ventral roots of cats and their roles in the control of sphincters under Dr J. E. B. Morrison.

Leeds
Wellcome Trust for an investigation into reflex autonomic responses of the heart resulting from inner stimulation under Dr R. H. Holford.

Leeds
Biochemistry—£16,299 from the MRC for studies on the primary structure of wick rhodopsin and on the organization in situ of the native molecule under Dr J. B. G. Phillips.

Leeds
Pharmacology—£3,000 from the British Heart Foundation for research on brain tyrosine hydroxylase in the genesis and maintenance of experimental hypertension under Dr M. R. Lee and Dr H. G. Dean.

Leeds
Medicine (LM)—£6,454 from Manpower Services Commission for biomedical assistance (three trainee technicians) under the direction of Dr D. A. Hall.

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Don's diary

Saying goodbye

The worst of having one's farewell party some time before leaving is that one moves into the status of the living dead. For the next three weeks I must sneak around the university applying an accident-prone meeting, a colleague whose ally, only a few nights before, had well with 70 degree proof tears, as he said how much he'd miss me, and now wishes I would move out so he can take over my office on the sunny side of the building.

My transitional status has rendered me reflective, even maudlin, a mood enhanced by the re-run of *Looking for Clancy* which I suppose a number of us working on the grammar school ladder have been urged on at least in part by the desire to escape that lingering smell of boiled cabbage which pervaded many a block of council flats.

Lying in the park

Not that grammar school was to be my royal route to bourgeois respectability. I left with four mediocre O levels when my father, a gentle and meagre man, crumpled to a platform on the Northern line after completing what was to be his final day of laying bricks.

The spur to get an education was a pronounced romanticism about the life of letters, which was drawn from American novels and incongruous with my £6.50 a week job as an office boy. A passion for reading and an inordinate desire to do things led to an erratic work history, spaced by months of idleness on accumulated savings and the occasional dole, and desultory efforts to become a wandering Bohemian.

Favourite with me were the months from April into summer when I could lie out in the park behind the nurses' residence, reading Dos Passos, Hemingway, Henry Miller and Kerouac, dreaming of an expatriate life in Paris and a "meaningful relationship" with a nurse who might one day wave. None ever did, so I began evening classes.

Friday June 17

The company was varied, and compared with grammar school the classes were decidedly stimulating. When office work and navying began to pull I applied to university, emboldened by my first academic successes since primary school, only to be withered by an interview, at Warwick I think it was, where my unwarmed choice of Salinger and treated to amiable condescension.

A second stab sent me on the long train journey to the alien North where I was confounded by being asked what philosophy was. That after all, was what I thought they might consider spending three years of my life on. I returned to the local library reading room a chastened man. A further year of respectable hours as an inebriate office manager at Beckham (where I found the fruits of my female assistants) drove me back to the marginal occupational life.

One could, in those days, tick over quite reasonably as a part-time barman and occasional night worker at a petrol station. I had recovered some features of the life which temporarily deflected me

from singing delayed adolescent suicidal impulses.

For one thing, contrary to my earlier conviction, it seemed I was not totally repugnant to all female kind. For another, not many of my steadily-increased gambling compulsion had us much time to third-year snooker as me. And thirdly, meeting a colleague whose ally, only a few nights before, had well with 70 degree proof tears, as he said how much he'd miss me, and now wishes I would move out so he can take over my office on the sunny side of the building.

My transitional status has rendered me reflective, even maudlin, a mood enhanced by the re-run of *Looking for Clancy* which I suppose a number of us working on the grammar school ladder have been urged on at least in part by the desire to escape that lingering smell of boiled cabbage which pervaded many a block of council flats.

An excellent Essex Institution came to my aid. An intercalated year learning Spanish—and what then seemed most generous grant—gave me the facilities to work myself with a stack of Great Thinkers and work my way through them.

They were heady days: 1968 formed a sociological generation at Essex as at many another university. Later bourgeois revolutionaries like the Angry Brigade were falling in love with the charisma of hand-some student leaders. Love and naive idealism then blossomed in an atmosphere of utopian excitement.

My colleagues and I were mortified to discover ourselves in the reactionary fastness of Granada in Southern Spain when students in Paris and Essex celebrated their short-lived release from bureaucratic constraint. We insured none the less that Granada University never opened its doors to such troublesome guests again. With a few more students, I think, I might have been able to carve a career in minor crime.

Fortunately, in that decade when everything seemed possible, I found my way into undergraduate life in a university which while not civilised by age, was still small enough and still enthusiastic enough about its founding vision to be at that time a not altogether inhumane establishment.

My undergraduate life was liberating, not as perhaps often the case. From parental surveillance and moral restriction, since that had never been a problem, but intellectually liberating. It provided an opportunity to reconstruct the moral, political and empirical assumptions through which I had hitherto viewed the cosmos and its contents.

I regard with concern those subterranean cohorts in Britain and America who, similarly alienated from the world, place their faith in Saroyan for whom life is a cold journey to the alien North where I was confounded by being asked what philosophy was. That after all, was what I thought they might consider spending three years of my life on. I returned to the local library reading room a chastened man. A further year of respectable hours as an inebriate office manager at Beckham (where I found the fruits of my female assistants) drove me back to the marginal occupational life.

The problems expansion left behind

A large post-expansion university system clearly serves a variety of purposes which have nothing to do with the idea of advancing knowledge in a combination of teaching and research. They train large numbers for a rather complicated world of employment (although I have pointed out in an earlier column that one must not be naive about this objective). They are, willy-nilly perhaps, pieces of acceptable voluntary unemployment.

These students are opportunities for realizing objectives of social policy, such as providing more equal opportunities for certain groups. They serve as mechanisms of "screening" and selecting for various positions. They incidentally also provide a base, a power base almost, for the new educational class, or caste.

One may not like these objectives—and the traditionalists certainly will not—but it is difficult to see how universities can escape the many social functions they serve, even if they have not chosen them themselves. Indeed I think that a better selection of the theme of higher education in the past 25 years—has done so universities.

In purely quantitative terms, it has been a most remarkable process. The OECD world has grown since the 1950s at a rate considerably above the growth of Gross National Products. In most of these countries, the university population has quadrupled since 1950. And, incidentally, while student numbers increased by a factor of four, public expenditure for universities increased by a factor of eight or even 10.

Today, about 1 per cent of GNP is allocated to universities. (It should be added perhaps that, in this respect as in others, Britain is lagging somewhat behind the OECD average.) Such quantitative expansion must have qualitative results; and the one which I shall single out here is the rise of the "pure" university.

Universities used to be thought of—in the latter half of the nineteenth century at least—as institutions combining a unique combination of teaching and research, and indeed teaching through research, and research involving teaching. They were the modern heirs of Plato's Academy, perhaps of medieval universities, and undoubtedly it has many attractions.

The problem is, however, that there are signs that, while such complexity may come about by organic growth, the addition of elements to an already existing set of arrangements in a pragmatic way, is much more difficult to create deliberately. Indeed, I have reluctantly come to the conclusion that deliberate differentiation is a contradiction in *ad hoc*: you cannot create difference, at least not in the modern world. Pressure on an equal status for all teachers, on an equal access to funds and so on would be too strong for the advancement of knowledge.

Such institutions were sources of innovation as well as inspiration. They provided a home for what might be called the representative activity of the search for truth—and I could not say that, for example, when there are cuts, these are not applied across the board but differentially. It would imply the encouragement of claims for biased support on the part of some institutions. It would imply recognition of demands to have some universities concentrate largely or entirely on postgraduate.

Indeed, it would imply a kind of chequered strategy for universities: strengthening the strong rather than trying to maintain everybody at the same level by redistribution. It is easy to see the difficulties in the way of such a process, especially in a system that is largely financed from public sources; and this is not meant to advocate one or the other solution. The more one looks at government action, the more one understands that most things will not be done anyway, but will happen in one way or another. I think that it is quite likely that differentiation will increase within the British system of higher education as elsewhere.



Ralf Dahrendorf

One day in the not-too-distant future we shall have to take stock of what the extraordinary process of expansion—which has been the theme of higher education in the past 25 years—has done to universities.

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But however and whenever that may happen, it is important not to lose sight of the fact that university expansion has not only solved problems, but also created them. And among the new problems that have arisen after expansion we run a double danger: on the one hand, large institutions of higher education

ROYAL HISTORICAL SOCIETY
ALEXANDER PRIZE
Applications are invited for the Annual Alexander Prize awarded by the Royal Historical Society for the best essay upon any historical subject. Candidates must submit their choice of a subject to the Literary Director for approval and send in their essay, which should not exceed 8,000 words in length, by November 1. The successful essay will be published in the Society's Transactions and the author will be awarded a silver medal. The essay is required to be a piece of original research not hitherto published. In recent years the Prize has been won by graduates who are getting near to the submission of their theses and by university lecturers.

Further particulars are available from the Secretary, Royal Historical Society, University College, London. Gover Street, London WC1E 6BT.

CONFERENCE OF DRAMA SCHOOLS
It has been agreed by the National Council for Drama Training (NCDT) that the interests of Drama Schools in the United Kingdom are best served by the holding of a biennial conference of Drama Schools. Applications are, therefore, invited from any interested Drama School/College/Theatre for membership of the Conference of Drama Schools. Applicant schools must provide at least a two-year full-time professional course in acting and/or related disciplines such as script management or directing.

Any school wishing for further details of criteria should apply to Mr. C. Cornack, Hon. Sec., Conference of Drama Schools, c/o the Rose Bruford College of Speech & Drama, Lambury Park, Sidcup, Kent.

Roy Wallis
The author is a lecturer in sociology at Stirling University and has just been appointed to the chair of sociology at Queen's University, Belfast.

A country apart where language counts

In the last of 11 articles Judith Judd looks at teacher training reorganization in Wales. Below the 1972 to 1981 reductions are shown.

In Wales the fate of colleges has been shaped by pressures unknown on this side of the border. Nationalism has already played its part in the history of teacher training in Wales and the present proposals are no exception.

Bangor Normal College, with only 400 teacher training places, and was saved from a merger with University College of North Wales a year ago, so that it could develop as a specialist institution for Welsh-medium teacher-training. The Government's decision to retain the college came after protests from the local authority and the Council for Welsh Language. After that, this year's scheme which suggests the college should be kept with its numbers unchanged can have surprised few observers of the Welsh scene.

In the light of the published criteria, however, the decision looks less clear cut. Bangor Normal is small and basically monotechnic, the type of institution which the reorganization has tried to avoid except in areas such as Cumbria where no other higher education is available. In Bangor there is another teacher training

college, St Mary's, now part of University College of North Wales.

The proposals for Wales bear few signs of the national plan which has been imposed, however roughly, in England. Only one institution will have its 600 places considered to be the minimum size for a teacher training unit and another mainly monotechnic college, Trinity in Carmarthen, is scheduled to survive. Trinity is the only remaining independent Church of Wales college. Another factor in its survival must be its development of Welsh language courses.

The most startling decision of all is that the Polytechnic of Wales, formed from a merger of Glamorgan College of Education and Glamorgan Polytechnic, should lose its teacher training. The polytechnic ends its submission to the Department of Education and Science with the comment that though any threatened institution will be able to produce valid arguments against its closure, no other institution in Wales can produce more valid arguments than the polytechnic.

About its standards there can be no doubt. Recruitment for the certificate of education stopped after the 1975 entry and in September last year it attracted the largest number of teacher training students with two A levels in Wales. There are 20 degree courses, whereas, say the staff, most of the other colleges in Wales have only one, the BEd. The polytechnic's own BEd received validation from the Council for National Academic Awards at the first attempt.

Why is the polytechnic on the closure list?

The closure letter, in addition to the general criteria, mentions "the college's potential role as part of a coherent system of teacher education in the principality". The BEd degree is the only one in Wales validated by the CNA, but this does not prevent the institution fitting into the system.

Another possible reason for the polytechnic's fate is geography. South Wales is well supplied with colleges. Besides the polytechnic there are the Gwent and South Glamorgan institutes of higher education. But none of the explanations seems entirely satisfactory and the college is struggling hopefully.

Staff at the West Glamorgan Institute of Higher Education are fighting equally hard to save their college. They point out that teachers from West Glamorgan will have to travel to Carmarthen or Cardiff for in-service training. The former college of education was one of the oldest in the country and the new institute opened on September 1 last year.

The college would have greater problems than most of the English institutes of higher education if it lost its teacher training. The BEd degree is the only one which is validated at the moment though attempts are being made to get BA degrees validated. There is a Diphil, but this would be difficult to sustain without teacher training.

The college has begun to raise its entry standards and this year will be the last in which students are admitted without two A levels. About 50 per cent of the September entry will have two A levels.

PROPOSED CUTS IN TEACHER TRAINING PLACES BY 1981



Adult service is 'becoming essential'

A dynamic adult education is essential to enable society to adapt to the pace of rapid change. It has now become a learning opportunity for adults, become a world for social, economic and cultural reasons.

The paper, produced by the Organization for Economic Co-operation and Development, calls for change to occur via disruptive conflicts and a "reasonable tempo" is set for adults not merely in policies planned for the future but in their own present process.

In the first of four parts, adult education in OECD countries is seen in a central argument that the marginal position in the formal education system is a provision is strongly presented. It claims the OECD, regional authorities to form comprehensive policies for education within the field of educational development.

Adults, says the report, are expected to perform a more personal role in their own lives and communities. The growth rate of adult education in quantitative terms has remained until 1960, in most countries, then climbed sharply in the last 20 years.

The result today, despite the reduction of public funding, adult education is a significant part of the lives of many people. Figures given in the report reveal that during the years up to 1970 and just beyond, 20 per cent of Sweden's adult population were participating in some form of education. During the period 23 per cent of adults were involved, 20 per cent of West Germany's and 12 per cent of the United Kingdom's.

Force show that, in Canada, the number of adults with 14 per cent and the United Kingdom with 12 per cent. However, if the figure broken down to give the reasons for the increase in the growth of education, over and above the riding of education to provide the underprivileged. In the OECD says, a direct result of expansion of upper secondary tertiary education, the overwhelming evidence that more initial education acquire the more they will continue education in life.

Looking to the future, education within the OECD member countries, the report says, options are open. It is a sporadic fashion without reference to any explicit public policy. Alternatively the existing activities could be strengthened and coordinated, or a new set of agreements of specific activities to be national priorities in secondary education programmes.

Finally, comprehensive programmes of adult education developed as an integral part of systems, relating to economic and cultural development of the nations involved. It is coupled with the possibility of part for specific activities, primary schools. But it is a past history yields no optimism.

Learning opportunities for adults available from HMSO.

Clive Cookson examines the futuristic ideas of Professor Gerard O'Neill

The man who plans to make science fiction come true

It is easy to get carried away by Professor Gerard O'Neill and start describing him as potentially the most important figure of the late twentieth century. The 50-year-old Princeton University physicist is apparently the first person to have converted the idea of large-scale space colonization from science fiction to a plausible programme using current technology.

He is little known in Britain, but his following has grown rapidly in the United States since the first publication of his ideas in 1974. Scientists from universities, industry and the National Aeronautics and Space Administration (NASA) are becoming involved, and the number of researchers working directly on projects inspired by Professor O'Neill has reached almost a hundred.

Indeed things are moving so fast that parts of the professor's new book *The High Frontier: Human Colonies in Space* (published by Jonathan Cape, £5.95), which has just been published in Britain, have already been overtaken by the latest research.

Professor O'Neill's conceptual breakthrough has been to escape from what Isaac Asimov now calls "planetary chauvinism" — the almost universal assumption by science fiction writers and futurologists that the human future in space (if any) lies in the colonization of the Moon, Mars and other existing planetary bodies. His programme will put us into hollow habitats that we will build ourselves (initially from lunar material) rather than on planetary surfaces.

Construction of the first habitat, Island One in space between Earth and Moon could begin within 10 years' time. By the late 1990s it could be completed and populated with 10,000 people. Island One is likely to be based on a hollow aluminium sphere almost a mile in circumference, but with skin only a few inches thick. Sunlight will enter through glass windows near the poles. This shell will weigh about 170,000 tons (150,000 tons of aluminium and 20,000 of glass).

Inside will be about 400,000 tons of soil, vegetation, buildings and all the materials necessary to maintain a high standard of living for the inhabitants. The outside of the sphere will be clad in three million tons of unprocessed lunar soil or industrial waste, as a shield against cosmic radiation.

The energy needed to pull all the necessary materials out of the "4,000 mile gravitational hole" in which the Earth sits would be totally prohibitive. Instead, Professor O'Neill proposes to shoot it into space from the Moon's surface with a device he calls a mass driver.

It will accelerate small "buckets" containing 20th payloads of compacted lunar material magnetically along an aluminium guideway 10 kilometres long, until they are travelling at 2,400 metres per second, the velocity needed to escape from the Moon's gravitational field. Then, after final correction of speed and directional errors, the bucket will release its contents, slow down and return to pick up the next load.

The stream of lunar material will be "caught" in free space, at a rate of 50,000 tons a month, and converted to its constituent chemical elements (notably aluminium, iron, silicon and oxygen). These will be used to construct the habitat.

Until this year the mass driver was technically the most speculative part of the space colonization programme, and Professor O'Neill appears to shake over it slightly intensely in his book. However, studies sponsored by NASA have recently put the concept on to firmer theoretical ground, and the first working model was fired successfully last month.

It was constructed by students at the Massachusetts Institute of Technology (where Professor O'Neill is a visiting professor this year) out of old plumbing, photoflash capacitors and ordinary copper wire. An acceleration of 35g (35 times gravity) was obtained compared to the previously calculated figure of 29g for a sophisticated version using superconducting wire and magnetic levitation.

The latest target is to have a mass driver 100 metres long working by 1979, firing projectiles at 2,200 mph. Professor O'Neill expects the mass driver to become more than a means of shooting rocks across space.

Professor O'Neill himself will obviously be spending a lot of time guiding the space colonization programme, but he is not planning to drop his other academic activities just yet. He has a heavy teaching commitment at Princeton next year, and will continue to supervise his high-energy physics group working at the Stanford Linear Accelerator Centre. (He invented the storage ring technique for colliding particle beams that is now the basis of almost every high-energy facility in the world.)

So far there is no participation by scientists outside the United States in the space colonization programme, but Professor O'Neill says he would be delighted if British universities got involved. At this stage it is up to them to approach USA, though, not the other way round.

space: man's drivers powered by solar energy will be a better means of propulsion than chemical rockets engine or launch spacecraft.

The cost of establishing Island One will be in the region of 100 billion dollars, he calculates — no more than five times the cost of the Apollo project, that put Americans on the Moon in 1969, and only 15 per cent of the investment in electric power stations that the United States will have to make over the next 25 years.

Electric power will provide the financial impulse for space colonization. The major activity of the early colonists will be the construction of satellite solar power stations (SSPS). They will convert the interrupted sunshine from space into a microwave beam, to be turned into electricity on Earth at receiving stations several miles wide.

The hypothetical event of SSPS power being the only source of electric energy in the United States by the end of the century, the receivers would take up only 0.2 per cent of the country's land area, compared to the 10 per cent of the continental United States, because average sunshine intensity is eight times less on Earth than in space, and solar cell conversion is only 16 per cent efficient, compared to 80 per cent for micro-wave.

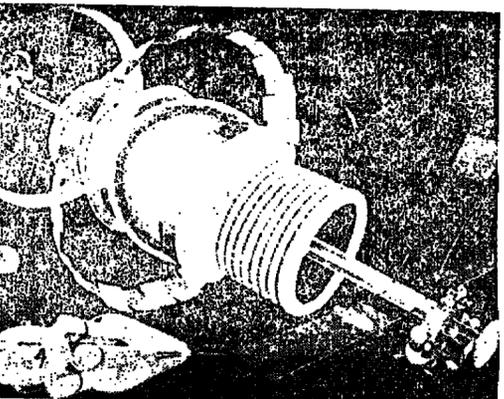
Professor O'Neill's calculations indicate that SSPS built in space from lunar material could produce clean power far more cheaply than any other method — conventional, nuclear or "alternative".

The prospect of enormous profits will induce governments and institutions to invest in space colonization, he hopes. The financial return should make the project more appealing than Apollo, where billions of dollars were spent putting a handful of men on the Moon, with no foreseeable economic gain.

Professor O'Neill believes passionately that space colonization must be an international effort. His book includes imaginary letters to the folks back home from all-American couples living in early space habitats, and one of them (from Edward and Jeanie to Brian and Nancy) shows the couple's children developing: "Legally all communities are under the jurisdiction of the Energy Satellites Corporation (ENSAT) which was set up back in the 1960s as a multinational profit-making consortium under United Nations treaty. ENSAT keeps us on a fairly loose rein as long as productivity and profits remain high — I don't think they care where the money goes. There are almost as many different kinds of local government as there are national groups within the colonies."

Will Britain join in? At present, however, the Universities Space Research Association (USRA), a consortium of 55 American universities with a headquarters in Houston, is acting as a focus for the many strands of research needed to get the project going. A task force and advisory panel are being assembled, with representatives of all relevant scientific disciplines, including social scientists, as well as industrialists, trade unionists and investment experts. NASA's Ames research laboratory in California is closely involved.

Professor O'Neill himself will obviously be spending a lot of time guiding the space colonization programme, but he is not planning to drop his other academic activities just yet. He has a heavy teaching commitment at Princeton next year, and will continue to supervise his high-energy physics group working at the Stanford Linear Accelerator Centre. (He invented the storage ring technique for colliding particle beams that is now the basis of almost every high-energy facility in the world.)



Island One, showing agricultural areas and radiators for waste heat. All energy for habitat, agriculture and industries is derived from sunlight.

Many pages of Professor O'Neill's book are devoted to glowing descriptions of life in space: Hawaiian climate, spacious living, accommodation and private gardens, a profusion of beautiful and beautiful plants and animals without pests, lavish entertainment facilities (like bullet at one-tenth gravity) . . .

Island One will rotate about twice a minute to maintain Earth gravity around the equator. At the poles along the axis of rotation there will of course be no gravity, so human powered flight and weightless sex are likely to be popular recreations.

An access corridor will lead from the sphere to its attached agricultural cylinders where four crops a year will grow in perfect climatic conditions, and industrial areas, where zero gravity will make many manufacturing processes much easier.

Lacking up, Island One's inhabitants will see a "sky" upside down houses and gardens on the other side of the sphere — which could be extremely disconcerting for people liable to claustrophobia and those who want to sunbathe nude on the lawn.

Professor O'Neill believes the good life and generous pay will more than compensate for the psychological difficulties of living in space, giving the authorities many more volunteers for the early habitats than they can accept. They will then be able to implement rigorous selection and training procedures.

After two or three years in space, pioneer settlers will probably be able to buy a ticket back to Earth, either for a period of leave or for permanent re-assignment. A vast spaceship, built at Island One and driven by a solar powered mass driver 20 kilometres long, would take them on a 20-day voyage to a transfer station in low Earth orbit. From there they will return to Earth in a "space shuttle" the sort currently being tested by NASA. Outward travellers will of course use the same means of transport.

Though our immediate motive for colonizing space will be to build orbiting solar power stations to solve the Earth's energy crisis, Professor O'Neill believes we shall go straight on from there to solve our population crisis. It will be technically possible, within 30 years of the completion of the first habitat, to send people into space at a faster rate than Earth's population growth, he calculates. Assuming only slowly increasing industrial productivity and revolutionary new technology, we could remove 200 million people a year from Earth, without serious environmental damage, and settle them in comfortable space habitats (each of which will probably contain 10 million inhabitants by then). Of course, exponential population growth cannot continue forever thereafter, but if we want to go on multiplying in space, the Solar System has the resources to support many thousand times more humans than live on Earth now.

hydrogen and nitrogen, which are exceedingly scarce on the lunar surface — and there will be no gravitational obstacle to their removal. "The availability in the space habitats of high paying jobs of good living conditions and of better opportunities for children may stimulate the emigration of a considerable segment of the Earth population even if overcrowding on Earth is less serious than now appears likely.

In the long run, because of the availability in space of unlimited cheap energy, of abundant materials and of efficient combinations of attractive living area with nearby industry, I suspect that Earth-based industry will be unable to compete economically with space-based industry.

"If so, then, as has occurred many times within Earth's history, people will follow the availability of jobs and that will mean emigration", the professor speculates.

Tourism in space He goes on to create a vision of a non-industrial Earth with a population of perhaps one billion people, which could be far more beautiful than it is now. Tourism from space could be a major industry, and would serve as a strong incentive to enlarge existing parks, create new ones and restore historical sights. The tourists, coming from a mostly pollution-free environment, would be rather intolerant of Earth's dirt and noise, and that, too, would encourage cleaning up the remaining sources of pollutants here.

"The vision of an industry-free, pastoral Earth, with many of its spectacular scenic areas reverting to wilderness, with bird and animal populations increasing in number, and with a relatively small, affluent human population, is far more attractive to me than the alternative of a rigidly controlled world, whose people tread precariously the narrow path of a steady-state society."

However, Professor O'Neill is very keen to emphasize that he is no Utopian idealist. He contrasts the humanization of space, which will open up new social possibilities to be determined by the inhabitants, with the rigid social ideas that, he says, have been a feature of historical Utopian attempts.

The deliberately limited, Earth-bound future that Professor O'Neill finds "abhorrent" will strike many other people as a safer and more satisfying prospect than his expansionist alternative — though no simple way may be harder to achieve than expansion. A realistic comparison of the risks of the two courses is impossible. The professor can persuade us that the physical risks of his colonization programme are acceptable, for example by showing that space hazards such as meteorites, cosmic radiation and solar flares can easily be dealt with.

What we cannot answer is the psychological question. Could the human mind, which so often seems unstable in the relatively natural environment of Earth, cope with the totally artificial life of space? Could a million men and women really live together satisfactorily in a sphere or cylinder a mile or two across?

In defence of literacy as a social skill

Professor Sir Edmund Leach recently wrote an article on the status of literacy in education entitled "Literacy in the dustbin" which had the salutary effect of focusing attention on varying attitudes to the importance of language in society at large, and in the educational field in particular.

Yet there is a danger inherent in this approach—particularly when the results of sophisticated linguistic research are presented in such a simple and appealing way that contributors to the current Great Debate on education are likely to seize on the simple statement without due respect for the subtler thoughts that lie behind it.

The modern approach to linguistics that tends to draw parallels between that science and anthropology is a seductive one, in that it depicts language as just another precisely structured activity in the whole range of structured activities undertaken by man the animal. This effectively demythologises the sacrosanct rôle of language implicit in its more traditional objective study. Clearly, verbal communication becomes just one more set of signs in the social landscape, no more important than other "symbolic" languages such as mathematics or, for that matter, international road signs. Indeed, it may even be less important, since the latter at least have the merit of being internationally comprehensible.

So far so good, and there is surely nothing healthier than the removal of language from the pedestal of inviolability on which its old objective rôle had placed it. There is little to be said for linguistic insularity, and the realization that language and society are inextricably entwined can do nothing but good for our cultural health and vitality.

It is but a short step from this unexceptionable thought to the suggestion that, given the technological sophistication of our world, most of the menial verbal tasks are beneath our dignity (or, more precisely, and this is what worries me, beneath the dignity of the average school-leaver).

Some recorders and electronic calculators can perform all those tedious little mental activities that we expect school children to perform. Television screens and computers can provide all the information in non-verbal form that the same school children require in their everyday life.

But this, surely, is where we go wrong. While the rising cultural identity of our times is gaudily accepted by the school-leaving population, may not have as its core the three Rs of traditional education, the fact remains that the world in which they have to find a place still organizes itself, far better or worse, on traditional lines.

Depriving children of the basic tools of literacy in a society in which some people—often the most influential—have linguistic mastery at their fingertips, is to put them at a serious disadvantage when it comes to deciding the future of that society and their place in it.

The practical application of elementary literacy lies not so much in the Victorian social skill of letter-writing, or the conjugation of Latin verbs, as in the individual's ability to decipher the mass of linguistic information hurled at him by the modern world. It is, after all, useful to be able to distinguish between the fact, opinion and propaganda that emerge from the television screen of the newspaper headline, the radio or the advertising hoarding.

It has been said that the crucial value of non-verbal, visual communication is that, being widely understood, it encourages social cohesion, whereas the complexity of purely verbal signs has a divisive effect. The fact is undeniable, but just what does this social cohesion amount to?

Surely the social, cultural, and perhaps even the political interests of our community are to be best served, not by reducing communication—verbal or non-verbal—to its lowest common denominator but, on the contrary, by doing everything possible to make linguistic richness and subtlety available to as many people as possible.



The need to decipher a mass of linguistic information

The problem, therefore, lies in the danger of dislocation between, on the one hand, a valuable and exciting approach to the science of linguistics which seeks to integrate language and society and, on the other, a simplistic reduction of communication to a sort of bland semaphore code.

The result, if we are not very careful, is a gradual drift towards an Orwellian society in which control is wielded by a literate élite over the ill-educated masses. Non-verbal communication is generally direct and unambiguous. It presents facts, it does not permit the inflated interpretation; it encourages conditioned responses to stimuli, not reasoned evaluation and decision.

Peter Wagstaff

The author is lecturer in French at Bath University.



Why no scrutiny of university departments of education?

The Secretary of State for Education and Science has shown courage in combating entrenched local opposition to changes which have prevented the rationalization of teacher training since both McNair and Robbins. Only in two areas, when faced with potential opposition from the churches and the universities, has he been held back from the logic of a national plan.

But I am disturbed that teacher training in the university sector has totally escaped the agonizing scrutiny which it has suffered in the public sector, for the James and other reports certainly did suggest that university training courses were fallacious.

The recent special pleading of Professor Bernbaum (THESE, January 17) and his snide attacks on public sector teacher training were unjustified. No one would denigrate the work of the university departments of education—yet in terms of common humanity, logic and equality of treatment, a similar examination should take place there.

Far from being scaled down, however, the latest proposals appear to move some 2,300 initial teacher training places from the deprived public sector into the university sector. And there are other universities too not only increasing the size of their postgraduate education departments but actually, without any scruple, edging into the field of initial teacher training by offering three or four-year BAs which include a licence to teach.

Over a dozen universities already offer first degrees of this kind, either BA or BSc. Has the Secretary of State any control over these courses? Are the universities, as he would expect, making recruitment to such courses to compensate their insituations for the loss of work which has come as a result of the closure of area training organizations?

It is not uncommon for universities, which initially resolutely confined the BEd and its teaching solely to the colleges and their satellites are now with undue haste offering in-service BEds of their own alongside an equally rapid development of MEds and other postgraduate degrees.

Surely the BEd is hardly an area in which the university has teaching expertise (as opposed to examining expertise)? If this understandable, perhaps somewhat shamelessly exaggerated, reputation is correct, it can only bring about the very clash with the Government which the universities are alleged to fear.

It is naive to believe that the Secretary of State, let alone other politicians, local and national, along with officials of the DES, would

A page open to all those who feel they have something of value to say on topics of interest and concern in higher and further education

Keeping up team morale in research

Mrs Shirley Williams recently criticized senior academics for the standard of their applications for Department of Education Science research money (THESE, March 18). If she is working to low standards she should also take a look at the way projects are run once they are funded.

With the expansion of both problems and the size of the applications into three ways the search carried out by the researchers has become more complex and so have the inefficiencies which contain it.

So little planned attention is given to the definition, organization and maintenance of a high quality team members should play their part as if they were a member of a team.

It is not surprising that the lack of research methods, more to the point, it is regarded as any kind of knowledge.

For the most part, research projects in higher education tend to be planned gaily on under the assumption that the members of the team will "sort themselves out" or "be down given time"; scarcely a professional approach. But, they have argued that research in social sciences was a professional staff, with its high turnover and its high turnover, and a strong tradition of professional directors.

The scant attention paid to the relationship between work and team morale is a reflection of the outstanding characteristics of large-scale social and anti-research. This is a seemingly either end of a spectrum, which is a pity, given that it is a very common phenomenon which is continually being investigated.

Even the most well-kept and most well-fused social scientists know that the satisfaction of his labor force is the architect of his success. It is called "personnel management".

Whether many project directors have not heard of the term, if they have, do not understand it is not clear. Either way, the reality of the informal processes of human interaction either to establish a chance equilibrium or a project team or to tear it apart. Conscious structuring of relationships between team members in order to maximize the director and research worker is all too rarely considered.

One of the main stumbling blocks to a more organized approach to this question is the spirit of individualism—or, more accurately, the dominance of traditional concepts of chaotic research. The concept of chaotic research, which has been ploughed for a considerable ideological research on a group basis.

While universities are expected to house research projects, they are not expected to provide the money and/or facilities which accompanies them, and they are not willing or able to support team research until their own research is well advanced.

But it would also be wrong to see research work as a purely professional activity. Their insecurity readily lends itself to basic cynicism: if the structure does not fit you as peripheral, you yourself that you are part of the universities' great search for truth is when your contract is out.

Brian Shaw

The author is a research fellow in education at Sussex University.

Student grants: no worse, but little better

The rising percentage of students not receiving the full parental contribution in their grants, and the revision of the parental contribution scales at least as important as the annual review of the standard grant itself. This year's settlement continues the break from the previous 11 years: last year, the parental contribution scale was revised to take some account of inflation, instead of using inflation to shift more of the cost of students' maintenance on to the students and their parents.

Since the Education Act of 1962 set up the present system of student grants, the parental contribution scale has affected in three ways the amount parents are expected to pay. Firstly, rising money incomes, which have made the parental contribution a higher percentage of income. Secondly, the amounts parents recover from the Inland Revenue by tax allowances have changed.

Thirdly, as the income on which parents are assessed is earned in the tax year ending six months before the academic year starts—an overall time lag of 18 months—the current income from which parents pay their contributions may be substantially above that on which they are assessed.

My figures showing the change in the parental contribution since 1962, in the accompanying table, take, for simplicity, a student living in lodgings at a university other than London or Oxbridge who is assumed to have earned nothing in addition to his maintenance to tax relief, and to have two parents and a younger brother or sister aged over 16.

Columns "a" and "b" of the table show what parents were expected to contribute in 1962-63 for various levels of residual income, in other words that remaining after deductions for various items, such as mortgage payments, residual income, and so on. To turn today's figures, and the most significant figures, into the 1977-78 figures, the amount demanded from the parents would be:

Ernest Rudd discusses the changing costs of supporting students to parents and I.e.A.s

The change in the cost of students' support to their parents and to the I.e.A.s since 1962-63

(a)	(b)	(c)	(d)	(e)	(f)	(g)
1962-63	1962-63	1977-78 equivalent of 1962-63 levels	1977-78 equivalent of 1962-63 levels	1977-78	1977-78	1977-78
Residual income	Parental contribution	PC less tax relief	Residual income	PC less tax relief	PC less tax relief	PC less tax relief
£200	£2	£2	£2,382	£243	£0	£243
1,000	32	32	1,000	316	316	316
1,500	74	74	1,500	717	717	717
2,000	124	124	2,000	1,177	1,177	1,177
2,500	174	174	2,500	1,634	1,634	1,634
3,000	224	224	3,000	2,091	2,091	2,091
4,000	320	320	4,000	2,930	2,930	2,930

PC = parental contribution.

The scientific message contained in a parable of anti-science

Ben Jonson's name does not figure prominently in the history of science. Indeed, such events as his celebrated and protracted feud with the architect, Inigo Jones—whose belief in a rational order in architecture linked him directly with the founders of the Royal Society, pursuing a similar order in nature—provides evidence for claims that Jonson's outlook was directly opposed to that from which the scientific revolution was to emerge.

At one level, the *Alchemist* could certainly be interpreted as evidence to support a charge that Jonson was against science. For Jonson can be seen to have been concerned with the ease with which men can be duped into parting with their money by use of a few Latin words, and perhaps the formula, and perhaps the formula, of some strange-coloured liquid, Jonson points an accusing and sceptical finger at the ambitious claims of the early scientists.

Scientists must have been an attractive target for a satirist skilled in using the ambiguities of illusion to strip away social masks and reveal the "human nature" that lies beneath. In *Volpone*, conceived as a successful farce, Jonson is concerned with the material greed; the illusionist is the rapacious oligarch who deceives his acquaintances by believing that he lies on his deathbed, baiting his trap with the promise of making good in turn the noble beneficence of his will.

The *Alchemist* also uses illusion as its central device, but in this case the illusion is the false promise of the just-for-power is its dramatic axis, and the ease with which the former is surrendered in pursuit of the latter is its dominant motif. By elaborating the theme of the alchemist, Jonson is part in the seventeenth-century debate about the nature and purpose of illusion becomes clear.

The use of illusion as a dramatic device allows the opportunity to discuss his acting talent at first, then Ian McKellen's performance as the housekeeper putting his master's

David Dickson discusses the RSC production of Ben Jonson's *The Alchemist* at The Other Place, Stratford

David Dickson discusses the RSC production of Ben Jonson's *The Alchemist* at The Other Place, Stratford

house to lucrative use while its owner has temporarily left town to avoid the plague, John Woolstaple's subtle, the accomplice recruited to masquerade as the alchemist, and Susan Drury's Doll Common, "their colleague", prove as volatile in their shifting characterizations as the elements whose transmutation they claim to be able to effect.

Jonson weaves a complex plot by presenting the alchemist in a variety of guises, and uses each to satirize a particular profession. For the clerk, Dapper, the alchemist conjures up the "queen" of the fairies who can give him infinite luck in betting; the seventeenth-century equivalent of a win on the ponies; for the rascal, Abel Dragger, portrayed in a delightful cameo by Nicholas Grace, the alchemist becomes an astrologer, carefully calculating the most propitious position of dogs and sheaves in a new shop; and for Sir Epicure Mammon, who comes in pursuit of the famed philosopher's stone and the riches to be gained through its power to turn all metals into gold, the alchemist is a loin-clothed ascetic dedicated to the purity of his science; finally to the Archbishop, who also seeks the stone but as a means of achieving political influence, the alchemist appears as a purple-robed magus, claiming privileged access to divine truths.

As the four separate plots unfold, a new method for understanding and controlling nature. And if the philosopher's stone was not to turn all that it touched to gold, the scientific method has certainly failed to generate the material wealth pursued by Epicure Mammon.

Yet if Jonson can be accused of being over-sceptical of contemporary science, he also displays a deep understanding of the philosophy which was to be equally important in establishing science as a major social activity in the second

The main argument that can be put forward for this generosity is the relatively wealthy is that, when their parents refuse to pay, the amount they need to scrape together is virtually prohibitive. But, as those with minimum grants generally suffer from financial strain than other students, this change seems somewhat odd.

Though this settlement has not by itself made students' finances noticeably worse, it will not completely arrest their deterioration because this has arisen partly from the decline in the real incomes of many parents, coupled with resentment against the continuation of the present contribution system being offset by the lowering of the age of majority to 18.

It has been obvious for some years, as I have argued before (THESE, December 10, 1976), that the present system of financing student education is unsatisfactory. It needs to provide extra money when no more is available from public funds, any solution must take the form of some kind of loan (or partial loan) scheme financed from outside the public system.

That we continue, nevertheless, to have annual negotiations which ignore the need for more fundamental change is probably due to the attitudes of the public system.

The National Union of Students is strongly opposed to any kind of loan scheme, and believes the only acceptable solution is the abolition of the parental contribution. As Britain has chronic economic difficulties, and as extra payments to students would mean the transfer of money from the population as a whole to a group who mainly need all of whom will be—middle class—the NUS attitude is both unrealistic and reactionary.

Given the NUS attitude, it would need political courage on the part of the vice-chancellors if they were to advocate a loan scheme, and the CUP have shown no signs of that courage.

The attitudes of the third party to the negotiations—the officers of the Department of Education and Science—are, of course, unknown, but can be assessed from the fact that, though opposition students over education (of both parties) have been schemes, this has not survived the assumption of office, with one exception, James Stedman was in Mrs Shirley Williams's 13 points; but rumours say that she did not discuss these with DES staff beforehand.

So it seems we must expect students' financial problems slowly to increase in the future, leading to results with which those aware of students' problems are now familiar—increasing numbers of students whose work is affected by their financial difficulties, and increasing difficulty in persuading students to use the vacations for the purpose for which they are intended, namely academic study.

The ultimate losers are not only the students, who are not getting as much as they should of their studies, but also, through our need for educated manpower, the country as a whole. At least we should be careful that the 1977-78 settlement has not made matters worse.



John Woodvine (Subtle), Susan Drury (Doll Common), and Ian McKellen (Pace).

half of the seventeenth century. Jonson was, in fact, a great admirer of the health of the nation. Bacon, *Stratford*, the *Alchemist* practiced by many alchemists—even though he seems prepared to accept the legitimacy of some of their techniques. Both saw "reason as the ground of art" as Subtle describes his own technique to Abel Dragger. And both demonstrate a Machiavellian grasp of *realpolitik* in their attempts to portray social action in terms of the "three man" that lies behind them.

So when Jonson depicts man (and woman) as a rational, calculating and ultimately "amoral creature"—"Foolish" view; which the "three tricksters enter into a business partnership as solid as the astrological predictions that they retail, as he is using more than a theatrical flourish in this concept, coincided with the ideas of the scientific philosophers, and their political counterparts. The RSC programme quotes Thomas Hobbes's view: "To this war of every man against every man, this is also consequent; that nothing can be untrue. The notions of right and wrong, justice and injustice have there no place".

The play ends with a single spotlight focused on Pace as he leans at the audience over this pile of earnings, promising "to invite you often and feast new guests". But the shift in mood from morality tale to morality lesson falls to convince. The tale, as theatre, remains relevant; the lesson, as didacticism, does not.

Order, please, in AFE student numbers

A number of important issues in the current debate on student number projections has not yet been given sufficient emphasis.

First, there is the ineptitude of many exercises in data collection. The only consistent in the expenditure White Paper has been the egg on the face of the statistics in their apologies for corrections to the previous issue, offered in a tone of embarrassment and naive surprise.

It would be very helpful to those of us trying to plan at institutional level if the Department of Education and Science and its agencies, and I.M.A., the I.C.A., CIP, etc. could get together to agree on a national statistical system. It would also save me and my staff a lot of time in supplying figures adjusted for different base dates and conversion factors.

Secondly, there have been changes between the 1976 and 1977 editions not only in figures but in phrasing. Recognition has been given to the cut in projected increases in full-time and sandwich students in HE (the lack of certain figures is one of the lacunae criticized above), but not so much to the considerably greater increase in projections of full-time equivalent numbers in non-advanced FE.

Nor has sufficient attention been given to the retreat on participation rates, where a planned 1 per cent increase has moved to an "assumed" increase of unspecified amount.

Thirdly, there are the implications of these changes for the public sector, which the gaps in statistics cannot hide. The University Grants Committee projections are close to those in the "lower" Conference of University Administrators projections, and well within the present national capacity of universities on the 1:10 ratio we are being pushed.

There were over 31,300 academic staff in universities in 1976, excluding those funded by non-public monies, and even a 1:9 staff ratio would allow some increase in student numbers from present levels.

The diminishing percentage of postgraduates as a result of fee increases, and of overseas students by the imposition of an absolute number ceiling, will mean a higher percentage of the future university population will be home under-graduates. This will allow some possible increase in the participation rate at degree level, further enhanced by the developing such courses to compensate their insituations for the loss of work which has come as a result of the closure of area training organizations?

It is not uncommon for universities, which initially resolutely confined the BEd and its teaching solely to the colleges and their satellites are now with undue haste offering in-service BEds of their own alongside an equally rapid development of MEds and other postgraduate degrees.

Surely the BEd is hardly an area in which the university has teaching expertise (as opposed to examining expertise)? If this understandable, perhaps somewhat shamelessly exaggerated, reputation is correct, it can only bring about the very clash with the Government which the universities are alleged to fear.

It is naive to believe that the Secretary of State, let alone other politicians, local and national, along with officials of the DES, would

David Turner

The author is sub-dean of the faculty of education at Sheffield City Polytechnic.

—because the CUA report recognizes that the universities attract the majority of well-qualified school leavers with A levels, and urges that the battle for survival be carried into other catchment areas. These are the mature students and those in DES from which a high percentage of polytechnic degree students come. A recent CIP survey shows that a level school survey provide less than half the applications and enrolments to full-time and sandwich degree courses in polytechnics.

The report also urges a policy of risk spreading by product diversification, for example part-time degrees, post-experience courses, and new vocational areas.

In addition the two years 1981 and 1982, when an absolute increase over present public sector student numbers is projected, coincide with the peak years of the 18-year-old cohort, and as my kids (or Sisypheus) would tell you, it is easier going down than climbing back up.

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Optimism over future of private institutions

America's private universities and colleges are managing to do their own thing in competition with the public system, according to a new study. And despite their commonly voiced complaints of a growing gap in the tuition fees they have to charge compared to the public sector, private universities are found to be no less competitive than they used to be.

The report, based on a survey of 100 private institutions, including all kinds except the large research universities, paints a far healthier picture of the private sector than has often been given by the colleges themselves. It says private colleges are stable in enrolment, finances and quality of academic offerings.

It also found that in the past 10 years the cost of attendance has not gone up in relation to the total amount of money a typical family has to spend. Charges for tuition, fees, board and rooms at private institutions were about twice as much, the report found.

The report is the third in a series of assessments by Dr Howard Bowen from Claremont Graduate School, and Dr John Minter. The two earlier studies, covering the years 1969 to 1974 and 1974 to 1975, found private universities were in a state of "steadiness without stagnation". But they gave a warning that lecturers' salaries were not keeping up with inflation, and many colleges were deferring essential maintenance work.

The new study, based on data for last year, finds that the private sector showed a "slight improvement" in its ability to attract qualified students.

There was a substantial increase in the size of teaching staffs last year with the average student-teacher ratio improving from 15.1 to 15.4 to 1. Salaries had again

caught up with inflation. Altogether, with the slowing down of inflation and a substantial 10 per cent increase in revenue, some of the financial ground lost during the last bout of inflation in 1974-75 had been recovered. The report notes that deterioration in the total amount of debt incurred by private colleges, but it warned that capital expenditures were still falling, and depreciation and obsolescence were taking their toll. There were a growing number of needs not being met.

Looking at the private sector's competitive position vis-à-vis the public sector, the report found it "fairly strong." Between 1965 and 1975, the average dollar difference between student costs at the two types doubled from \$1,022 to \$2,099. At the same time, the per capita disposable income of Americans also doubled from \$2,430 to \$5,040. Thus the dollar difference did not change.

Figures from the College Scholarship Service showed that private tuition and fees were nearly four times those charged in public colleges. But the report said that when all the costs of attendance were taken into account, including transport and personal expenses, the difference was only about 25 per cent.

"This difference, while still substantial in dollar terms (1,700 to 1,800), is quite modest in relation to total costs, which is of the order of 7,000 to 10,000 a year," the authors said. Much of the difference was made up by the larger sums private colleges were able to make available for students aid.

"These calculations suggest that the competitive position of private higher education is much stronger than is often alleged on the basis of the so-called 'tuition gap' and this perhaps explains in part the remarkable staying power of the private sector."

Boston president calls for reassertion of excellence

"The only standard of performance that can sustain a free society is excellence. It is increasingly claimed, however, that excellence is at odds with democracy. Increasingly we are urged to offer a dangerous embrace to mere adequacy."

This is how Dr John Silber, the outspoken President of Boston University, begins an article in the current issue of Harper's magazine in which he castigates what he sees as a dangerous academic degradation in America today.

The fight for excellence is profoundly philosophical, he says. "It is a fight for a world not founded on the equality of opportunity we have begun to reject anything that exceeds anyone's grasp."

As examples he cites the war against apartheid which does not distinguish between excellence and adequacy, and the related phenomenon of grade inflation, which suggests all students are equally gifted and hard-working.

"Some people believe that the pursuit of excellence is essentially anti-democratic. This fallacy is most obvious in the commonly voiced charge that educational institutions with high academic standards of excellence in admissions and faculty recruitment are 'elitist', a term that for most people is redolent of special and unearned privileges and suggests that these institutions are havens for

the incompetent offspring of the rich. Dr Silber said calls for the maintenance of standards were often denounced as racist and sexist, but only a sexist or racist could believe that women or members of minorities were in fact inferior to everyone else and would be unable to compete on an equal basis if judged by performance alone.

He particularly criticized the movement to establish the United States as a bilingual nation as a "striking example of this same degradation." "Until recently, he said, America was unique in the world in that it had a single national language with dialects that were easily mutually intelligible.

Attempts to require such things as bilingual ballots exempted a large group of citizens from a requirement, hitherto expected of all citizens—the acquisition of some competence in the national language.

This patronized Hispanic culture by implying it could not survive coexistence with the English language. And it had racist overtones, suggesting that Spanish-speaking American citizens could not be expected to acquire the same level of competence that was acquired by immigrants from Germany, Italy, Russia, Poland, Greece and other countries, and that until recently was expected of Spanish-speaking citizens.

Canadians face jobs crisis

For some years the underemployment of university graduates has caused growing concern in the United States, as the economy cannot find jobs at all. And with more and more students graduating each year and a stagnant economy, the future for young people in Canada is far from bright.

The facts of the crisis have been starkly outlined in a new report by Statistics Canada on university graduates in Ontario. The picture in the country's largest province is indicative of the trend all over the country.

This year a record 67,000 students will receive degrees or diplomas in Ontario. Bachelor's degrees, 7,100; Master's, 900; PhDs, 2,100; university undergraduate diplomas, and 18,900 community college diplomas.

This compares with a total of 56,000 in 1974, when the provincial unemployment rate was 4.1 per cent. It is now 7.1 per cent.

Even those who graduated in 1974, however, have had a hard time finding jobs. In that year 29 per cent of the "new" university graduates in the labour force were either unemployed or earning less than \$7,000 a year. Among the arts and social science graduates the situation was even worse, with 58 per cent unemployed or earning little. After a year in the work force about one fifth of all that

year's graduates still faced employment problems. In September, 1974, 29 per cent of graduates from colleges and universities were also unemployed or making less than \$6,000 a year.

This proportion varied from about 44 per cent of visual communication and social science graduates to 10 per cent of technicians and technologists. A year later a quarter of the CAAT graduates were in the same situation.

A survey of those who graduated in 1974 suggested that the market value of higher education was clearly less than students hoped. After a year in the market, their unemployment rate was still above the provincial average and there were serious underemployment problems.

Statistics Canada considered starting salaries of \$7,000 for Bachelor's degree-holders and \$6,000 for CAAT graduates the minimum for jobs requiring post-secondary certification. In 1974 graduates working full-time and getting less were considered underemployed.

In 1974 17 per cent of that year's graduates earned less than \$7,000. A year later 21 per cent got less than \$8,000. The largest group of underemployed—one third—was in the humanities and social sciences. By contrast only 4 per cent of engineering and architecture students were in this salary bracket.

About a fifth of the 1974 CAAT graduates were underemployed, that is, they were earning less than \$7,000

a year later. The worst job study were education and health services, where 60 per cent were underemployed.

Since 1971, however, more and more people have gone to university. About 44 per cent of this year's new graduates had education beyond school. By the proportion will be more than 50 per cent. Ten years ago, in the comparable figure was 24.9 per cent.

Altogether this year about 67,000 graduates will come on to the job market in Ontario, Statistics Canada estimates, as well as another 100,000 school leavers and dropouts at various levels of education.

Future projections show the annual number of school leavers rising to 194,700 in 1981, down from 194,700 in 1986—just the current level.

The increase results from the war baby boom generation, which began in 1960. But the projected drop will not help the situation much. There will be many school leavers, career graduates who fail to get a job or improve their pay.

The statistics Canada report says so many young people have gone into higher education in a short time. A survey of attitudes showed that the number—43 per cent—enhance their prospects of employment (as opposed to 34 per cent who said they wished to know their knowledge).

Dons oppose post for Dr Kissinger

Protests at Columbia University over the possible appointment of Dr Henry Kissinger as a full-time professor have reached such a pitch that the former Secretary of State may now withdraw from consideration.

Dr Kissinger was considering a chair of political science; his critics objected to his policies on Indochina and Chile when he was President Nixon's National Security adviser.

About 150 lecturers signed a petition opposing the appointment some weeks ago. They said the procedures used to offer the appointment had included "irregularities and improprieties." Dr Seymour Melman, professor of industrial engineering, also objected to appointing Dr Kissinger on the basis of his expertise.

Columbia was proposing to set up a specially endowed chair for Dr Kissinger costing between one and two million dollars. Much of the money was expected to come from Nelson Rockefeller, Dr Kissinger's long-standing patron.



Dr Kissinger's expertise doubt.

More sit-ins hit California

Four hundred and one sit-in demonstrators at the University of California, Santa Cruz, were arrested last week as a series of protests continued on several of the university's nine campuses against university ties with companies with financial interests in South Africa.

As well as protesting against apartheid, the demonstrators demanded the overturning of the Alan Rikie decision, the California State Supreme Court ruling against the university's special admissions programme for minority group students.



National Guardsmen firing on students in 1970

Kent State 'insensitive'

Students at Kent State, the university where four students were shot by National Guardsmen in 1970 while demonstrating against America's intervention in Cambodia, have been camping on the spot to prevent the construction of a new university building nearby.

The students accuse the university of "insensitivity" in building so near the site. They plan to take legal action if the demonstrators are not let leave when construction starts in this summer.

Major campuses link to aid graduate courses for minorities

Nineteen of the leading universities in America have launched a co-operative effort to recruit more of their own minority students into graduate study programmes.

Starting this spring, the effort to reach black, Chicano (Mexican-American), Asian and American Indian students in their final two undergraduate years is intended to stem a steady national erosion in new minority graduate students.

While progress in the enrolment of women has been made in many areas, the euphoric increase in graduate applications and admissions by minority students generated by the impact of the civil rights movement of the early 1960s, and swelled by the return of older students to achieve postponed educational goals, now appears to be over.

The 19 institutions taking part in the new Cooperative Minority Recruitment Committee include Brandeis, California Institute of Technology, University of California at Los Angeles, Chicago, Columbia, Cornell, Harvard, Massachusetts Institute of Technology, Michigan, Minnesota, Pennsylvania, Princeton, Stanford, Vanderbilt, Washington University, University of Wisconsin, Wisconsin and Yale.

The committee will help institutions exchange the names of minority students who express an interest in graduate study, grouped by academic field.

This is not intended to be a substitute for an evaluation of complete academic records, but to help

About 100 students have taken part in protest against the plan for a \$6m physical training centre, which would come within 100 yards of the memorial to the students.

The students accuse the university of "insensitivity" in building so near the site. They plan to take legal action if the demonstrators are not let leave when construction starts in this summer.

Deakin University in Victoria will admit up to 100 students aged 21 or over on a first-come basis. There will be no tests of the usual selection tests or examination requirements.

Instead, the applicants will get samples of the course materials which they can study at their leisure. During this time they will be able to contact staff at Deakin to discuss requirements and work-out the process.

If they decide that they can manage the course they can enrol for 1978. The experience of the Open University will be used in setting up study centres for Deakin's off-campus students in at least four Victorian towns. Negotiations are under way to set up more.

Like the Open University, they will provide meeting facilities, audio-visual aids and opportunities for students to meet visiting tutors and counselling staff.

In its plans for expanded off-campus participation the university will have to persuade the Australian Universities Commission to release more funds.

Deakin's vice-chancellor, Dr F. R. Jones, says the university needs funds for 500 off-campus students next year. However, the commission has suggested a limit of 400.

Meanwhile, at Macquarie University in Sydney the chancellor, Sir Geoffrey Barwick, told a graduation ceremony that the university should enrol more part-time students at the expense of school leavers.

Dr Barwick said he believed that it might be better for school leavers initially to go to colleges of advanced education.

Spain goes to the polls next week for the first time in more than 40 years. Concrete proposals for educational reform are spectacularly lacking. Harry Debelius reports

Much ado about abstract values

Spain's universities are not over-crowded, under-financed, hampered by bureaucracy, crippled by a lack of research programmes and facilities, plagued by strikes or simple absenteeism on the part of some of the teaching staff. But political parties have either not bothered to mention education in their platforms for next week's general election or have made short shrift of it.

The elections, the first free poll the country will have seen in more than 40 years, will be held on World War II, in the sense that politicians are talking a great deal more about "democracy", "liberty", "fascism", "Marxism" and "totalitarianism" than about specific issues.

And, even in the cases in which solutions to the problems of education are proposed—particularly in higher education—they are usually offered more in the context of a particular political-philosophical framework than as answers to specific problems. Political pamphleteers have moved into the ivory tower.

To make matters worse, many Spaniards seem to be unable to consider any political issue without getting emotionally involved. Consequently they are frequently intolerant of the views of others, regardless of the lip service—at least—which they have to pay to democracy today.

One issue, for example, which probably need never have become one, is the great debate about whether schools should be chosen by the state should be abolished. Some—but not all—left-wing organizations are calling for the elimination of all privately-run educational institutions, and especially those run by religious organisations. On the other hand, in advising voters to give their support to parties which favour state subsidies for such schools,

Higher education will probably have to endure yet another year of repeated demonstrations and strikes, with a continuation of the present government's do-nothing policy and with possibly even more political interference on campuses than at present, while Spain's next leaders turn their attention to what they consider more immediate problems.

By the time the new parliament is installed in July, the post-election government has taken office and the summer holidays are over, it will be rather late to do anything about education before the beginning of the autumn session. The very optimistic assumption that education will be a priority for a government which is expected to make the drafting of a new constitution its first job.

Significantly, when the elections were only a fortnight off, the party which, according to the latest poll, is expected to win the most seats in the new parliament, the Centre Democratic Union (UCD), had still not published its political programme.

The UCD's problem is that it has virtually no unified policies since it is a combination of parties, federations, groups and individual opinion-moulders with philosophies ranging from capitalist-monarchist to socialist, passing through the way liberalism, Christian democracy and social democracy.

This powerful centre coalition seems to have as its only aim the face of Premier Adolfo Suárez, which swears out from huge green, white and orange posters everywhere.

The parties which have the most to say about education are those on the left. Yet the Spanish Socialist Workers' Party (PSOE), the mainstream socialist party headed by the Andalusian lawyer Felipe Gonzalez and the party which will probably win the next election, has a record of votes, is exceedingly sparing in its references to education. The issue is covered in the PSOE electoral programme in these words: "Public

education is needed which guarantees equal opportunities for all students. The Popular Alliance (AP), the neo-Francoist coalition led by former Interior Minister and former Ambassador to London, Senor Manuel Fraga Iribarne touches briefly in its posters, slogans, and speeches on social issues, such as education and better pensions for the retired, but gives no explanation of how its intentions will be put into practice. One can assume, however, that things would not be much different than they were under General Franco.

The Spanish Communist Party (PCE), surprisingly, is milder in its approach than the socialists. The PCE wants more free state-run schools, but it would not abolish those operated privately. Presumably this attitude applies at university level, too. It suggests that the Communist Party might not interfere with such institutions as the University of Navarra (Opus Dei), Comillas (Jesuit) or Salamanca (Pontifical).

One explanation for the Communist stand in favour of retaining privately run educational institutions is that the party has infiltrated the teaching profession to significant extent, particularly in non-state schools in large population centres.

Spain's second most important socialist party or coalition, the political organization formed by the Psoe and the revolutionary Centre for Educational Research and Innovation (PSP-FPS), headed by a law professor who was ousted from his chair by the late dictator for political reasons, does include education as a plank in its programme.

This coalition, under the leadership of Professor Enrique Tiera Colvan, calls for obligatory free co-educational schooling up to age 17, exclusively in state-run schools, school provision for the educational needs of the younger children, and an "Open University" with "the suppression of selection of all kinds".

Although the institute is obviously primarily concerned with European affairs, Dr Cerych says that the American dimension cannot be ignored. That is why it was felt appropriate for ICED, which has its self-researched European problems, to be associated with the institute from the start. But he emphasizes that the governing council now consists solely of Europeans.

Dr Cerych is anxious, too, that the institute should be pan-European, rather than just west European, in its outlook. Contracts with the EEC, for example, stipulate that the work will not be confined to problems affecting the Nine.

He readily admits, however, the difficulties of engaging six European universities in meaningful collaboration. The biggest stumbling block is that they invariably want to work only with official inter-governmental bodies—and that is precisely what the institute is not.

Attempts to get around this problem by associating Unesco's European Centre for Higher Education with east European research projects are being made; the governing council includes a Pole and a Hungarian; and the annual review of European higher education developments which the institute is planning will contain a chapter written by an east European scholar. But, says Dr Cerych, too many socialist research papers are still of the "we have no problems" variety.

The institute's publications aim to be policy-oriented, useful and practical. But visiting fellowships for comparative education researchers are available in Paris or Brussels (where the institute also has an office, run by Dr Gabriel Fragarete). "We are very much in the business of brain-storming," says Dr Cerych.

Australia

Self-selection for new campus

from William Purvis SYDNEY

Australia's newest university has announced a self-selection scheme similar to Deakin's Open University for admitting mature-age students to its off-campus courses next year.

Deakin University in Victoria will admit up to 100 students aged 21 or over on a first-come basis. There will be no tests of the usual selection tests or examination requirements.

Instead, the applicants will get samples of the course materials which they can study at their leisure. During this time they will be able to contact staff at Deakin to discuss requirements and work-out the process.

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Republic of Ireland

Parties split over role of technology sector

from John Horgan DUBLIN

One major issue separates Government and Opposition on higher education in the Republic as both head into a June 16 general election dominated increasingly by prices and unemployment.

This is the nature of the relationship that would exist between the universities and the technological institutions operating at third level. One other plank of the Opposition's education policy was that the upper limits for qualifying for third-level awards should be raised.

This, however, was preempted by the government last week when it raised the upper limit for the first time in three years.

The technological issue is connected with the need for a fundamental review of the overall structure of higher education, which was recognized as long ago as 1967, but which has not yet produced any legislation.

A long, and at times apparently interminable succession of reports and studies finally came to an end in 1974, when the Cabinet rejected a Department of Education plan for the strengthening of the technological sector within the existing universities.

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education options when it lost office in March 1973, maintaining that it will restore the binary system if it returned to power, will free the technological institutions from what some of its defenders describe as "university domination".

The government, for its part, has yet to produce its long-awaited Higher Education Bill setting out the institutional framework of the policy decisions. It was apparently ready, at least in draft form, at the end of last year, but the transfer of the Minister, Mr Richard Burke to the post of EEC Commissioner in Brussels, and the subsequent appointment of a new Minister, appears to have led to a temporary shelving of this Bill pending the result of the election.

The institutions concerned appear for the most part to have accepted the "binary" system of universities, which were engaged in an initial decision (since reversed) to "preserve" full autonomy in the larger colleges, have now been largely mollified.

Only in Dublin, where projected rationalization involving some key institutes in Trinity College and University College Dublin produces occasional dissension, is the picture incomplete.

One of the missing elements is the precise nature and size of the new National Institute of Higher Education, planned as a counter-part of the one in Limerick.

The Union of Students in Ireland, which has always campaigned for a comprehensive system of higher education, maintains that the present government plans are not truly comprehensive.

In addition, it is making the level of student grants an issue in the campaign, despite the recent increases. A government review of the entire grant system is at present in progress, and USI has warned against the introduction of a loan scheme.

The Opposition, which had almost completed a review of its higher

Think-tank where 'small is beautiful'

Paul Moorman on Europe's latest higher education research body.

Europe's newest—and smallest—higher education research agency is now in its second full year of activity. The Institute of Educational Studies, based on the campus of the University of Paris-Dauphine. It has a staff of 10 and no plans to increase that number. "Small is beautiful," says Dr Ladislav Cerych, the Institute's director.

Dr Cerych, a veteran performer on the stage of the international education bodies (he has been with Unesco, OECD and the College of Europe at Bruges), says the institute has a simple aim: "To be a

He admits that it faced more problems than it has in its earliest days. Most difficult was convincing people of the need for yet another organization devoted to higher education.

As well as Unesco with its specialist agencies such as the International Institute of Educational Planning and the Bucharest European Centre for Higher Education, there is OECD and its prestigious Centre for Educational Research and Innovation. The EEC has its directorate for education and research and the Council of Europe in Strasbourg has a committee on education whose Committee and Research is perhaps the most prodigious of all in its production of documentation.

So why the institute? Dr Cerych identifies two characteristics not shared by its rivals ("colleagues") might be a better word, as the Institute's research on distance education has now been largely replaced by an atmosphere of mutual cooperation; they are flexibility and independence.

The compactness of the enterprise means that plans and projects can be readily changed (the researchers would not necessarily agree) and freedom from accountability to the sensitivities of governments allows the institute to be both critical and concrete in its recommendations.

Formally, the institute is an autonomous arm of the Amsterdam European Cultural Foundation (late President; Prince Bernhard). Co-founders with the EEC were the EEC Commission and the International Council for Educational Development of New York.

British connections are strong. President of the institute's council is Lord Briggs, Provost of Worcester College, Oxford, and Dr Ralf Dahrendorf, Director of the London School of Economics, is a council member. Mr Sam Cooke, a member with the Open University, is assistant to Dr Cerych, and Dr Gay Neave, from Edinburgh University, is a senior research fellow.

Additionally, Mr Anastasios Christodoulou, the OU Secretary, is a project consultant, Professor John Biggston, professor of education at Keele, is chairman of the editorial board of the Institute's learned journal, *Educational Europe*, and Dr Brian MacLure, editor of *The Times Higher Education Supplement*, is a member of the editorial board.

Much work is being developed in conjunction with the EEC. About a quarter of the institute's research funding at present comes from

involved all the country's black universities. Professor van der Ross said that socio-political frustration arising from obvious discrimination, and the violent way in which it was expressed, were linked with black consciousness—a force that "could not be written off".

He told the commission that the disadvantaged background from which black students came led to their being unable to cope with the academic standards set by white universities.

Political and academic frustrations and a lack of adequate facilities at the Colacur University of the Western Cape were, among the main reasons for student unrest there last year, according to a memorandum submitted to the Clifters Commission of Inquiry by the university's Rector, Professor Richard van der Ross.

The commission is investigating the countrywide riots which began on June 10 last year, and which

involved all the country's black universities. Professor van der Ross said that socio-political frustration arising from obvious discrimination, and the violent way in which it was expressed, were linked with black consciousness—a force that "could not be written off".

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A quarter century of change

Twenty-five years ago, Miss Florence Horsburgh ("the face that launched a thousand cuts") was Minister of Education. There were 13 degree giving universities in the United Kingdom. There were 10,000 British university students (full-time and part-time), 9,000 full-time university teaching staff, and annual university expenditure from public funds of £26 million. The Princess Royal was Chancellor of Leeds University and the Duke of Edinburgh provided over the University of Wales. A man called John Sparrow had just been elected Warden of All Souls.

Today, there are more universities, more students, more teaching staff and more money. Next year, there will be no less Sparrow. The Chancellor of Leeds is the Duchess of Kent. The Chancellor of Wales is a recent graduate of Trinity College, Cambridge.

Has anything else changed in 25 years? In those days, colleges of advanced technology were a gleam in the eye of various committees which were concerned, as the Percy Report of 1945 put it, that "the position of Great Britain as a leading industrial nation is being endangered by failure to secure the fullest possible application of science to industry and this failure is partly due to deficiencies in education." A Royal College of Technologists was in the air.

Fingers of suspicion

In West Germany, unlike Britain, academics are direct employees of the state. Their relationship with the state is governed by extensive legislation making the conditions of employment of academics civil servants and all public sector employees very similar.

Civic rights in Germany

Sir—The *Times* has carried in recent years reports, articles and letters about the erosion of civic rights which, under the operation of the *Berufsverbot*, has affected teachers, student-teachers and others in the German Federal Republic.

Language policy

Sir—Universities, polytechnics and colleges need some measure of a foreign student's language ability before offering him a place on a course. It is the language policy adopted by universities ("Influences widely" as the authors of "What Queen's English do Universities Accept" (*Times*, May 6) say, how much more so does it for polytechnics and colleges.

Communication studies

Sir—Nicholas Garnham's piece of co-trailing on communication studies (*Times*, April 15) has to be charged after, in spite of the shifting target that it constitutes.

Letters to the Editor

Sir—As a university teacher concerned for the reputation of my profession, I am greatly disturbed by the various press reports appearing during the past week which have called into question a number of university practices and procedures.

Production of meaning

This too became popular, and meanwhile the scientific sense, as Desautel, declined. Two new neutralizing senses replaced it: "ideology" was "false consciousness" or "contrasted with 'positive' knowledge and with science. Or, generally, ideology was the sphere of the production and signification of meanings, no longer primarily within biology but within philosophy, psychology, linguistics and communications.

All in a name

Sir—Although not the major point of Frances Gibb's article "What Stands between Lecturers and the Dole" (*Times*, May 27), I feel some clarification is necessary with regard to the suggestion that "redundancies as a result of a directive from the Secretary of State for Education are covered by the Crombie Code."

The paths and pitfalls of ideology as an ideology

Raymond Williams looks at changing uses of the concept of 'ideology' in the analysis of cultural and social institutions

I have beliefs, principles, values, standards. You are besotted by an ideology. He and she are besotted by ideologies. We have tradition, common sense, wisdom or science. You are slaves to an ideology. They are slaves to ideologies.

Photography as text

Papers like these are now being very widely written, in what is at its best a learning process and at its worst (and ironically) a process of reproduction. It is useful to think of this kind of analysis, of course, continued. But the special challenge of the structuralist emphasis, and of some related formalist and other emphases, lay in new procedures of analysis, which were based on a special presumption of universal autonomous systems.



Images in search of an interpretation: the cover of Working Papers in Cultural Studies No. 10.

The plural emphasis is again welcome, though the eventual thrust of the argument is to demonstrate "coexistence" of different positions—summarized as "equality" and "equality of opportunity"—and it is then not clear whether these were merely historical fusions (and confused) by the Labour Party whether, as the formalist element of their analysis would indicate, they are necessary parts of a "dual repertoire".

Handwritten note: 10/10/1977

Author's address: Dr Raymond Williams, WCPD10, University, price £1.75.

BOOKS

A cuckoo using a sparrow's nest

Shakespeare's Dramatic Challenge by G. Wilson Knight
Croom Helm, £5.95
ISBN 0 85664 309 2

Shakespeare: The Man and his Achievement by Robert Speaight
Dent, £6.50
ISBN 0 460 04268 8

Modern Shakespeare Offshoots by Ruby Cohn
Princeton University Press, £15.70
ISBN 0 691 06289 7

Wilson Knight has spent a good proportion of his 80 years and his dozen books on Shakespeare trying in one way or another to bridge the gulf between the academic and theatrical approaches to the plays. His latest book, *Shakespeare's Dramatic Challenge*, is in many respects his last word, a summary of his critical achievement in Shakespeare studies. It is also the one in which he addresses himself most thoroughly to the problem of the gulf as he sees it. Starting from his identification of it in *The Wheel of Fire* as an intellectual defeat, a barrier which should not be there, he has worked out his own way of straddling it and now gives us his findings.

Shakespeare's Dramatic Challenge is, strictly speaking, only the libretto for the performances Knight has evolved to bridge the gulf. They are performances (or chapters) designed to demonstrate and comment on what he calls the "rising quality" of Shakespeare's tragedies and tragic heroes. The book has to be read partly as the tip of his phenomenal iceberg of Shakespeare criticism, partly as the libretto for his programme of recitals.

In the straddling process one foot stands firmly on his academic theory that Timon is the culmination of all Shakespeare's tragic heroes. The theatrical foot rests on the point that the poetry spoken by the heroes follows a rising pattern within each play and from one play to the next, culminating in *Timon of Athens*. The point is a rather wobbly one. Much of Knight's detailed commentary on the poetry is superbly acute and equally rewarding to read or hear. On single plays he can be wonderful. His analysis of Romeo's poetry in *Act V* and of the pattern of Richard III's development is splendid. But the method has inherent weaknesses which limit the achievement of the book.

On his theatrical side Wilson Knight is a monodist. Every play is presented in this book as an exposition of the tragic hero rising up to the second half of *Timon*, where the hero occupies the stage throughout, and speaks almost entirely in monologues interrupted only occasionally by visitors from the world he has rejected. Knight rationalizes his vision with the academic theory that Timon is the only one of all Shakespeare's heroes free of the Dionysiac element present in what he calls the "dramatic" superman of the earlier tragedies, the Apollonian, monodic hero.

The fruit of this view appears on the theatrical side. *Timon's* second half is undramatic, the least theatrically manageable of all the plays. It is the "one section in all Shakespeare's works which, if it were most free to cut, alter, add or delete, Add Knight is compelled to do it to. On the assumption that the second half was left unrevised, he drafts with only Timon's speeches fully worked out, he adjusts the order of the scenes and suggests business which might help to carry it off on stage. It's a sort of *Capote* in which the Apollonian hero Shakespeare's last word must, in order to become Apollonian, shed the dialectic and hierarchical dramatic conflicts of the Dionysiac heroes of the earlier plays. To qualify as Knight's perfect superman he must lose his dramatic qualities. One cannot help suspecting



Sir Laurence Olivier as Macbeth in Glen Byam Shaw's 1955 production at the Shakespeare Memorial Theatre, Stratford-upon-Avon. An Annotated Facsimile of Glen Byam Shaw's 1955 Promptbook, edited by Michael Mullin and published by the University of Missouri Press at £20.00.

that Knight elevates Timon because he most nearly matches Knight's own monodist inclinations. Reading the book as more than Shakespeare reinforces this suspicion. On Macbeth, the other most nearly monodist hero, but looking at what he says of Gaunt's scented late speech or Henry V's Agincourt speech makes you wonder how he could uphold their jingoistic bravura as splendid poetry without at least some note of the dramatic context which ought to complicate our responses to them as jingoism and therefore as dramatic poetry. Along with this single-minded devotion to the poet's speeches goes a love of analysis which I suspect is pariously close to ham. Noting Hamlet's advice to the players, for instance, Knight is forced to argue that tragic poetry should be delivered in a manner "at once torrential and yet helpful, nor does it allow for the modulations which exist even in the players' speeches in *Hamlet*."

One difference between academic and theatrical approaches to Shakespeare—not a difference deep enough to make a gulf—is the manner of the academic critic to be uncharitable to seek for a statement about the plays which will have some of the validity of scholarship (some lovely chapters, the "definitive" statement). The critic tries to suppress not the subjectivity of his own response but the appearance of subjectivity. The intention of the critic assumes that there is only one Shakespeare. Theatrical approaches on the other hand, seeing the plays as raw material for stage performance, more or less openly acknowledge that there is a Peter Hall or a Michael Cresswell, whoever gets the ultimate credit. Academic Shakespeare would itself be as ephemeral as theatre production.

This view of the gulf, if it is at all, is reinforced for me by two other recently published books. Robert Speaight's *Shakespeare: The Man and his Achievement* appears also to be the product of a lifetime devoted to both the theatrical and academic study of the plays. But it is a self-indulgent book, shaky in its scholarship and

What Ruby Cohn's book does most impressively is to cater with comfort and assurance through all this range, not hesitating to register her verdicts and not seeking to identify much in the way of patterns. Trivialising is her favourite word of dismissal, but she is acute on the various levels of triviality too. Stoppard's *Reasons*, *Crantz* and *Guidenstern* are *Dead* she describes as dovetailing *Hamlet* scenes into a *Godot* situation, and summarises it as "a witty commentary rather than a theatrical exploration into either 'great work'". She calls her subject matter a chance of conglomeration and rather ably refuses to identify any recurrent patterns or indeed to offer any overview. She notes how many offshoots are political in intent and seek a strong moral purpose behind the most provocative Shakespeare offshoots. Any axes of her own she leaves on the shelf. Describing Césaire's *Une Tempête* with sympathy she records surprise at her own polemical tone.

Using offshoots from Shakespeare of course imposes some sort of pattern from the start. Whether he is an inspiration, a model or a foil, the offshoots are a reaction against old but adjustments to find new relevance, demystifying or being inventive, the starting point is the same. And it is this which makes the book so rewarding. A pattern of inter-continental, relevant, modern theatre. The motives for rewriting Shakespeare vary enormously. Shaw typically claimed to have turned him from a divinity and a bore into a fellow creature. More recently Edward Bond said, "I rewrote it so that we now have to use the play for ourselves, for our society, for our time, for our problems to make Shakespeare more, in the current vogue word, more, in the re-creation against the nineteenth century stage romanticism. Bond along the lines suggested by Raymond Williams in *Modern Tragedy*. The distance between the two measurements is the sort of theatrical history come to life.

Cohn has a thesaurus of words for rewriting Shakespeare, including abridgements, adaptations, amplifications, omissions, revisions and versions. To which we can add, presumably, offshoots, and thinking of Speaight and Wilson Knight, criticism. Some of our contemporary, says Professor Cohn, owe to us, whereas others would remould him into relevance. Where we might wonder, does the other end of the process begin and the other end? Outside is a bit idiosyncratic—in *Hamlet* with an uncut text and John Barrymore advising to try to find Shakespeare's original. Cutting a Shakespeare text, using it as an operation not different in kind from either a collage production or a critic's published reading. They all Shakespeare. Relations who make offshoots, directors who make offshoots, critics who offer definitive readings are all doing the same thing, and there is no gulf between them any more. Then there is between academic and theatrical approaches. Wilson and Knight's comparison of the author of those agonies of flame that singes nobody's sleeve.

The frontispiece of Knight's 1964 *Shakespearean Production* is a photo of Knight as Timon in his 1946 production. The frontispiece of *Shakespeare's Dramatic Challenge* is a photo of him as Timon in 1976, aged 79. It is a full-length view taken from below to show him towering over his audience (emphasizing his pectorals, which are impressive, more than his wig, which is not). Perhaps some such image of the author should be put at the beginning of every book about Shakespeare.

Andrew Gurr

Indian Art

Shakespeare Turned East by Henry W. Wells
Administration
Prasanna, University of
Rs.30, \$10.00

There is a distinctive voice to be heard in Indian studies. It is represented by such as Viswanathan, whose essays, often scholarly, often offhand, subtly present insights that might not be to a Western critic. *Shakespeare Turned East* is a different kind. It is a far ambitious attempt at a synthesis between Shakespearean romances and the drama of India.

The subject is, most uninforming, who wanders a little in Indian literature, but similarities in substance to those plays in which we strike and the state forgive our illusion. It is also large enough for a lifetime, and in these of collaboration between Gowda and Professor Wells, not easy, proofs appear, not just in the text, but that the book is something that can do little for the reputation of a university.

Collaboration may be the curiously disjunct *Shakespeare Turned East* divided into short sections usually stop just at the end, they are becoming a study, for example, of the recollection in both the powerful contrast, as persons, between the "state" of play and the reflection and so on by Western nostalgia, interrupted—that is, by a lightning bolt of the mythological theme, and Elizabethan humanism. The end of the war as part of Sir Keith Hancock's work, did before finishing it. The DSS did not appoint a successor and the SSC eventually gave a grant which enabled Gowda to write this book. He began in 1970 and decided to ignore the surviving Weitzman drafts. That seems a strange decision and is not for me clarified by his "important reason" the lapse of time since the drama, because it was the Shakespearean romance which Shakespearean tragedy, and have to be hurried on to conventions; to the copy, Elizabethan humanism, and a standard history as that of G. A. Lawless or Rodney Barker's *The Labour Party in Education and Politics, 1900-1951* (1972). The British Educational stage over which A. Butler presided with notable skill, seems to have occurred in the most part in, as the contemporary bureaucratise "abilities". After reading Gowda's "abilities", which, quite without would reproduce that argot. I cannot pick out three dominant features of class traditions, its moral imagination of those who planned for a future of peace and prosperity. A telling example here is that of the outlook of the universities. The total post-war educational outlook within the other than Cambridge, London and Oxford—amounted to little more than nine thousand. The UGC and the Government thought this too small. But even the most radical educational outlook within the Labour Party, represented by Atlee and Tawney, only argued for a 50 per cent increase in the number of persons with higher qualifications. Robbins was further from the imagination than Benjamin Jowett.

Education in the Second World War: A Study in Policy and Administration by P. H. J. Gosden
Methuen, £15.00
ISBN 0 416 75900 9

The story of the schools, in the Second World War, ought to be fascinating to at least three potential sets of reader. For those who it should offer the nostalgia of childhood revisited; for the young it could be a pedagogical variant of Dad's Army; for the social historian it could be an authoritative test of the generally received view that the two wars laid the ideological foundations of social transformation—in this case an experiment of temporary class abatement through the German threat which gave us a view of, and the resolve to provide, an upbringing after the war fit for the children of heroes. But all three types of reader will, I fear, be disappointed.

There are two reasons. First the memories of the old and the fantasies of the young cannot be encompassed within the narrow official sources to which Mr Gosden has so rigidly confined himself. Ronald Binns, for example and by contrast, used local and unofficial sources to give us a much more vivid picture of the experience of our grandparents in their quiet schoolhouse at *Akenfield* than Gosden has attempted for our parents despite their drama of full-scale and frantic evacuation.



Mrs. Ellen Wilkinson

Privately educated, notable for an official discussion of the world in which the Archbishop of Canterbury felt no conflict between his Christianity and the championing of the independent schools. Similarly the Permanent Secretary of the Board of Education (then was, Sir Maurice Holmes, found it unembarrassing to admit that the Fleming Commission had been precipitated by the fact that the future of the public schools was in jeopardy "as a result of falling numbers of pupils, largely due to the low level of the birth-rate and the decreasing real income of the families from which the pupils were drawn". His conclusion, "ie, the conclusion of the principal servant of the state is that on balance there were public school facilities which were 'chance'". Moreover, against the charge that his scheme involved spending a great deal of money on few children he was prepared to argue that the children should be picked at eight and then "assisted generously through preparatory schools so that they could take their place in public schools without distinction of dress, speech or money".

These elevated persons found it difficult to conceive that the new Labour Government of 1945 might take a seriously different course. The subsequent generation showed that they were more right than when the prospect looked different. The Archbishop wrote to Ellen Wilkinson to say that the Government Association had taken it upon the settled policy of the Ministry that the number of direct grant schools would remain much the same as before. She replied: "I must make it clear to Your Grace that I am wholly unable to accept the assumption which appears to be implicit in your letter that I am under some sort of obligation to adhere to the policy adopted in this matter by my predecessors." Yet it took another 20 years before the direct grant schools were removed as a statutory instrument of public subsidy to private privilege.

The class attitudes of the day, however, also now appear as a quaint moral innocence. Thus the Labour Probation Service was sent in 1924 to investigate the bulk of the population who had died together in shelters in discomfort and enforced idleness with nothing to do but wait, listen, gossip, knit and gamble". And in Blackpool a sub-committee on the problem of juvenile delinquency found that "some films were demoralising, some literature was vulgar and certain types of modern music based on rhythmic patterns of primitive tribes had a definite sexual motive". The old may well be nostalgic for such "grave peril to youth".

The other striking feature of the conversation among decision-makers at that time is the limited imagination of those who planned for a future of peace and prosperity. A telling example here is that of the outlook of the universities. The total post-war educational outlook within the other than Cambridge, London and Oxford—amounted to little more than nine thousand. The UGC and the Government thought this too small. But even the most radical educational outlook within the Labour Party, represented by Atlee and Tawney, only argued for a 50 per cent increase in the number of persons with higher qualifications. Robbins was further from the imagination than Benjamin Jowett.

A. H. Halsey

Class attitudes

BOOKS

Taking Rights Seriously by Ronald Dworkin
Duckworth, £9.80
ISBN 0 7156 0715 4

The Practice of Rights by Richard Flathman
Cambridge University Press, £8.50
ISBN 0 521 21170 0

In spite of an aroused public interest in, and concern for, issues involving civil and human rights there has been a marked absence of attempts to provide a rigorous analysis of the concept of rights, so the appearance of studies by Ronald Dworkin and Richard Flathman thus is very welcome. Professor Dworkin's analysis of rights is embedded in a statement of a new liberal theory of law, in opposition to "the ruling theory" of legal positivism which is the most powerful formulation in the social rule theory of H. L. A. Hart. Dworkin's distinguished predecessor in the Oxford chair of Jurisprudence, Dworkin's analysis, in brief, that no rule of recognition, stipulating how legal rules are to be identified, can ever account for the role of legal principles; since it is legal rules, at least in part, directly derive their force and authority. Dworkin develops his argument by analysing the way decisions are reached in "hard cases" where legal experts sharply disagree. In such a case the judge has to choose between the rule established in precedent and some rule thought to be fairer". This is essentially a political decision and the judge is consequently bound by the doctrine of political responsibility which states that "political officials must make only such judicial decisions as they can justify within a political theory that also justifies the other decisions they are asked to make". The "hard case" Dworkin argues, poses a problem to the judge not of personal discretion, but of determining what the legal rights of the parties are; in terms of the most comprehensive and consistent political theory that he can formulate, compatible with the settled practices of the legal system within which he operates.

Dworkin recognises that in any particular "hard case" divergent judgments might be handed down by judges who use different political theories, which applied the same theory in different ways. He insists, however, that this in no way invalidates his claim that there is always a right answer in any "hard case" and that in civil law, by right answer, Dworkin appears to mean the "best fit" given by that political theory which provides the best justification for the settled law (including a theory of legal mistakes). The right of either plaintiff or defendant in every civil case in which the right is absolute it is also very old sort of right; since while the right is absolute it is also abstract in the strict sense that neither party can ever know which of them has the right, or whether any particular judgment is the right answer which one of them has a right to. The only thing which either party might specifically claim, in terms of Dworkin's theory, is the right to expect the judge to seek for the right answer in the manner indicated. But since judges are fallible no party would have a meaningful, usable entitlement to a right answer, even assuming, as Dworkin does, that there is always one, and only one, "best fit".

Richard Flathman proceeds very differently in *The Practice of Rights*, using an encompassing conception of civil individualism to justify rights in human terms. The exercise by any individual of a basic civic right, like free speech,

Rules on rights

to the detriment of another's interests is justifiable, not simply in terms of the weight of their respective interests, but of the importance of the right itself in serving the interests of all members of the polity. Flathman treats rights as forming a practice with characteristic configurations and patterns of action, comparable with those to be found in the practice of law or medicine. Participants in a practice are right, obligatory, proper, praiseworthy or simply expected that they from certain ways and refrain from others. According to which a right in general, and this right in particular, has meaningful application to the supposed action and that the rules that establish rights in the society do in fact accord the right claimed. But it seems doubtful whether one can regard the rights of participants in a strike for union recognition and the union employer as participants in the common practice; especially since the ruling purpose of each is to abolish the practice itself—the list class, the latter by capturing the strike illegal. Flathman proceeds to examine the logic of the practice of rights within a general framework, comprising (i) an obligation to identify the right in question, and the question and conditions in the rules and conventions governing the practice; (ii) a right-holder able to exercise the right; (iii) a right-holder with obligations to the right-holder which he is able to discharge but may avoid—where the right concerns a disadvantageous to the holder and disadvantageous to the person disadvantaged. Flathman applies this framework to such of Hohfeld's four categories of rights—as liberties, as strict rights, as powers and as immunities. The upshot is a cogent piece of conceptual analysis.

L. J. Macfarlane

Land and family connexions

Production and Reproduction: A Comparative Study of the Domestic Unit by Jack Goody
Cambridge University Press, £6.00
ISBN 0 521 21294 4 and 29088 0

Jack Goody has two long-standing and in his profession (as he explains) somewhat eccentric commitments. The first is to the study of social change over a very long period. The second is to the use of whatever method or combination of methods promises to illuminate those changes. In each, he has more in common with some eighteenth-century Scots (some of whom he approvingly mentions) than with many of his contemporaries. In both, however, he has the advantage of 200 years of historical research, ethnographic inquiry and methodological refinement.

Here, he deploys all three—with aplomb, and considerable, especially to answer two connected questions: what are the causal connexions between patterns of agricultural production, inheritance (or as he calls it, devolution) and kinship, and how have these connexions arranged themselves in the course of human history? From historians he extracts accounts of each and of the possible connexions between them in now vanished societies, societies of which there is no anthropologically adequate record. From ethnographers he extracts accounts of them in more recent societies, accounts which are doubtless more accurate and almost always more detailed but which, like the first set, are not readily generalisable. For generalizations, he draws particularly upon the *Ethnographic Atlas* of standardly coded information about 853 different societies. And from the method, he draws, he draws out some techniques for making causal inferences.

Goody starts with the suspicion that the production of a surplus allows, if it does not actually entail, the appearance of social classes;

that social classes will attempt to maintain their wealth and the power and status it confers; that they will try to do this, among other ways, by making sure that their property is not dispersed in its transmission to the next generation; and that they will try to do this, in turn, by elaborating, suppose this, an insistence upon strict rules of entanglement rather than exogamy, of "marrying in" rather than "marrying out", and by devolving property to their lineal descendants, both male and female, rather than to other kin, or just to their sons.

He first checks that this suspicion is borne out by the information in the *Atlas*, using hierarchical linkage analysis, and then, finding that it is (with the interesting qualification that the more extreme, so-called "caste" systems of stratification do not fit in the expected way), sets out the most likely-looking model as a path diagram in each variable explains variance in each variable explains variance in the next.

This much corroborated, the final step is to defend the view that since societies have in general proceeded from hoe to plough, in so far as they have proceeded at all, so there must have been an "evolution" from relatively permissive rules of devolution and marriage and a certain casualness about the fate of the sort of arrangement more familiar in modern Europe. The inference is a reasonable one, and the author's defence, in the space he allows himself, is convincing. The result, in general, is that now, the black African societies are on the one side and the Eurasian ones on the other.

Geoffrey Hawthorn

questionable sources and that by the time it has passed through the coding in the Human Relations Area and come out at the other end in one's measures of association, especially with measures of linear relations, it does bear a somewhat ambiguous relation to reality; but certainly to reality's four points; but they then point out that if it is discarded, it becomes impossible to test any grand generalizations about society at all. The dispute is a complicated one, and inevitably technical. Difficult, and inevitably different views. My own is that the *Atlas* data are insufficient, in themselves, to check any guess, but like Goody, I see no reason why they should not allow us to proceed to a first, crude approximation. Beyond that, one is back once more with the particular accounts, often more subtle, probably more accurate, but particular nevertheless. Goody uses some of these to explore four implications of his general theory: for the status of women, and especially the difference between co-wives and for "strategies of heirship" and for class differences in marriage rules. He finds a certain association between intensive agriculture and diverging devolution on the one hand and co-wives, adoption, careful strategies of heirship, essentially to keep it local, and strict rules of marriage among the rich on the other. The intention of the book as a whole is to explore and suggest, not in any sense to prove, what it does, with just the right degree of boldness and caution, and with a brevity, clarity and wit that make it not only very stimulating but also very accessible. It tickles the palate, sharpens the mind, and makes one immediately want to go out and see whether the connexions it describes hold up in one's own particular societies, and how they do. It is an excellent book.

Geoffrey Hawthorn

BOOKS

From Bob Cranky to Jack Spring

The Collier's Hunt by Robert Colls

Society itself is created by crises of power, class and (is?) economically defined...

So Mr Colls concludes, having endeavoured as a social historian to go behind the institutional records...

in the social and cultural history; their non-objective character grants a certain invidiousness to his assessments...

A certain wariness is required. Folk-songs are far from scrupulous about fact, and moderation is rarely one of their virtues...

What a Methodistism was infused in their madness the change from Bob Cranky to Jack Spring, non-drinking, non-whoring Stakhanovite...

They are then of particular value

in the same end). But the same qualities that encouraged well-ordered labour also encouraged well-ordered unionism...

English newspapers still preach Canadian nationalism through a rear window...

The trend towards impermanent government, reported by the French...

Allan Rodway

Orthodoxy

A History of the Churches of the United States and Canada by Robert T. Handy

English newspapers still preach Canadian nationalism through a rear window...

The trend towards impermanent government, reported by the French...

Allan Rodway



Two early public library book plates dating from the turn of the century. From Books for the People: An Annotated History of the British Public Library by Thomas and Edith Kelly...

Black holes

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The last decade has seen considerable advances in cosmology and the study of "black holes"...

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Anyone who like myself, was introduced to this third volume of Essays in Labour History...

bound together by anything but the loosest thematic form. The subject is a naturally attractive one...

Other contributors, it is true, provide evidence of the contemporary, spirited counterattack waged by the Socialist League...

W. R. Garside

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A sedimentary history

Geoaerchaeology edited by D. A. Davidson and M. L. Shackley

"Geoaerchaeology" is a term coined to describe the study of archaeological sediments...

In balance

Trends in Applications of Pure Mathematics to Mechanics edited by G. Fichera

Theoretical mechanics is the oldest and most highly developed branch of applied mathematics...

Reviewers

Michael Balls is senior lecturer in human morphology at Nottingham University's medical school...

BOOKS

Starting with the cell

An Introduction to Developmental Biology by John McKenzie

The author's aim in this introduction to developmental biology is to arouse interest by directing the student's attention as soon as possible to features in their own development...

The change from organogenesis, which occupies 55 of the book's 212 pages, is an excellent and useful summary of an important topic...

Michael Balls

development, congenital abnormalities and teratology, embryology and learning. The book's chapters are interesting and informative and should indeed stimulate the inquiring mind to pose further questions...

Michael Balls

The myoblast is generally considered to be committed to the spiral cycle series and therefore dividing from the mesomyotubular which is better called the multipotential stem cell.

Michael Balls

Geog stats

Statistics in Geography: A Practical Approach by David Ebdon

This is the latest output of what has become almost a growth industry: the production of introductory statistical texts for geographers.

The present contribution has much to commend it—format and illustrations are clear and attractive...

Black holes

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Stanley Gregory

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Theoretical mechanics is the oldest and most highly developed branch of applied mathematics...

The fourth section deals with biological sediments, although it is mostly concerned with sediments in which the biological fraction is a minute part.

Reviewers

Michael Balls is senior lecturer in human morphology at Nottingham University's medical school...

A. J. Legge

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Holidays and Accommodation

OVERSEAS TEACHING POSTS

LECTURERS IN ENGLISH, MEDIA ASSISTANTS, ENGINEER (SAUDI ARABIA)

Communication Skills in English Project, King Abdul Aziz University, Jeddah
This Project has been developed over the last 2 years with British Council professional support and has involved the production of specialized teaching materials for the implementation of English medium courses in the Faculties of Engineering and Medicine.

- (1) Deputy Director (man only).
- (2) Lecturers and Group Leaders (men and women) to teach English for Science and Technology.
- (3) 2 Media Assistants each with experience or training in 2 of the following: graphics design, photographic, educational TV studio work and production of models for classroom use.
- (4) An Engineer with experience of in-service maintenance of a wide range of audio visual equipment including TV and audio production facilities and language laboratories.

Salary: Deputy Director, to be arranged; Group Leaders, on the scale £7,724 to £13,494 p.a.; Lecturers, Media Assistants and Engineer, on the scale £7,082 to £12,862 p.a.

Salary will be assessed on qualifications and experience and family circumstances and will be free of local tax.

Free furnished accommodation is provided, 1 year contracts probably renewable.

Applications to: Dr. A. G. Hopwood, Oxford Centre for Management Studies, Kebleton, Oxford OX1 5NY

from whom further particulars may be obtained.

LECTURER IN ENGLISH LANGUAGE (MONGOLIA)

University of Ulan Bator
To teach English language to University students.
Degree and formal qualification in TEFL (minimum RSA) essential, with experience in audio visual aids and teaching methodology desirable. An interest in ESP would be appreciated.

Salary: 1,300 turgriks per month (present rate of exchange £5.84). It is not convertible into sterling. In addition, an annual subsidy of £1,866 will be paid into the Lecturer's UK bank account.

Benefits: free medical treatment; accommodation and employer's portion of superannuation.

Return fares are paid. Local contracts are guaranteed by the British Council. Please write briefly stating qualifications and length of appropriate service quoting relevant reference number and title of post for further information and application form to the British Council (Appointments), 66 Davies Street, London W1V 2AA.

THE BRITISH COUNCIL

Director University Computer Centre

The University of London Computer Centre, located at 20 Gullford Street, London, W.C.1, has four CDC computers and a staff of about one hundred. It provides a general computing service for more than fifty academic institutions in the University of London and other southern universities.

Applicants should have at least five years' experience in higher management, preferably direction, of large computer systems providing services for research. Experience in the academic field would be an advantage.

Salary will be subject to negotiation but is likely to be attractive to those earning up to £10,000 p.a. at present. Formal applications, together with a curriculum vitae, should be sent by 1st July 1977, to the Personnel Officer (THES), University of London, Senate House, Malet Street, London WC1E 7HU, 01-835 8000, ext. 15, from whom further details may be obtained.

University of London

OXFORD CENTRE FOR MANAGEMENT STUDIES

Research on the Behavioural, Organisational and Social Aspects of Accounting

The Centre is establishing an interdisciplinary group for the study of accounting processes. Applications are invited for four research associates to work on the following research proposals:

- (1) Corporate Social Accounting: the impact of social and political change on accounting thought and practice in Northern Europe. At least one of the two associates working on this project must speak fluent German.
- (2) The Design of Financial Information for Hospitals: the process of financial resource allocation in hospitals and the role played by information. The associate will assist in the establishment and monitoring of groups implementing the ideas.
- (3) Case Writing Project on Accounting in a Changing Social Environment: the preparation of educational materials to reflect the impact of economic, technological, social and political change on accounting.

The Research Associates will be appointed for a three year period. The salary will be based on the Oxford University Research Scale ranging from £3,333 to £5,627 plus USS.

Applications to: Dr. A. G. Hopwood, Oxford Centre for Management Studies, Kebleton, Oxford OX1 5NY

from whom further particulars may be obtained.

FINLAND The University of TURKU Temporary Lectureship in ENGLISH

1.8.1977-31.7.1978

Applications are invited for this Lectureship, mainly concerned with the "B.Ed." programme at Turku and Rauma Teacher Training Institutes. It is hoped to make a permanent appointment to this post in 1978, for which the temporary lecturer will be considered. The salary is on the V26 scale, commencing £403 m/mon. Qualifications in relevant fields at M.Phil./Ph.D. level are desirable. Knowledge of Finnish is not required.

Applications including detailed curriculum vitae and birth certificate must reach Kirjuri, Turun yliopisto, 20500 TURKU 50, FINLAND, not later than 12 noon on 30th June, 1977. Applicants' two referees should send their testimonials direct to the Chairman, School of Philology, University of Turku, 20500 TURKU 50, by the same date.

In the event of further vacancies occurring within the English Department for 1977-78, whether on V26 or V24 scales (commencing 3074 m/mon), these will if possible be filled from among the applicants for the above-mentioned post. Applicants are therefore asked to STATE EXPLICITLY whether they would be willing to be considered for such vacancies.

OXFORD WORCESTER AND ST HILDA'S COLLEGES CENTRAL ELECTRICITY GENERATING BOARD RESEARCH FELLOWSHIP IN ENGINEERING SCIENCE

Applications are invited for a CEGB Research Fellowship from candidates wishing to work in the Oxford University Engineering Laboratory on research relevant to the wide interests of the CEGB. The Fellowship will be at Worcester College or St Hilda's College according to whether the successful candidate is a man or a woman. The Fellow will be expected to participate in College teaching and may also undertake a limited amount of University teaching. The appointment will be for three years, and it is hoped that the successful applicant will be able to take up the appointment on 1st January 1978, or as soon as possible thereafter. The salary will be based on the University Lecturer scale and the College Fellowship brings certain additional benefits and emoluments.

Further particulars and application forms may be obtained from the Sector Tutor, Worcester College, Oxford, before June 30, 1977.

UNIVERSITY OF ZAMBIA

LECTURER IN ELECTRICAL ENGINEERING

Applicants should have a special interest in the area of communications and particularly in antennas and microwaves. The possession of a higher degree and evidence of relevant practical experience or of fruitful co-operation with industry in the general area of radio, television, antenna design, etc., would be a distinct advantage. The appointee would be required to lecture at all levels and to initiate and supervise research within the Department.

Applications close 8th July, 1977.

LECTURER IN BEHAVIOURAL SCIENCES (Social Psychology)

Applicants should possess a Ph.D. degree in social psychology and have an interest in the development and teaching of statistics to undergraduates. They should also have research and teaching interests in other areas, such as personality and social policy. A broad acquaintance with the behavioural sciences so that they can contribute to the Department's activities.

Applications close 2nd September, 1977.

LECTURER/SENIOR LECTURER IN EDUCATION

Applicants will be involved in the development and teaching of a B.Ed. school experience program, and will conduct undergraduate and postgraduate courses in the field of curriculum theory and development. Candidates should have appropriate qualifications and experience in practice secondary teacher education or curriculum studies.

Information on conditions of appointment and application procedure available from the Association of Commonwealth Universities, 25 Gordon Square, London WC1H 0PF.

UNIVERSITY OF WEST INDIES BARBADOS

LECTURER IN THE DEPARTMENT OF HISTORY

Competence to teach in Modern European, North American, and Caribbean History, with particular reference to the Caribbean region, is essential. The successful candidate will be expected to participate in College teaching and may also undertake a limited amount of University teaching. The appointment will be for three years, and it is hoped that the successful applicant will be able to take up the appointment on 1st January 1978, or as soon as possible thereafter. The salary will be based on the University Lecturer scale and the College Fellowship brings certain additional benefits and emoluments.

Further particulars and application forms may be obtained from the Sector Tutor, Worcester College, Oxford, before June 30, 1977.

Universities continued

UNIVERSITY COLLEGE OF NORTH WALES, BANGOR DEPARTMENT OF SOCIAL THEORY & INSTITUTIONS

Appointment of Director of research project into the delivery of social services in rural areas

Applications are invited from persons with appropriate academic qualifications with proven research ability and experience for the post of Director of a Research Project into the Delivery of Social Services in rural areas sponsored by the Welsh Office and the Department of Health and Social Security. The research project has the full cooperation of the Gwynedd and Clwyd County Councils.

The person appointed will act as the Director of a research team, comprising two research assistants and will work in cooperation with the staff of the Department of Social Theory and Institutions.

Salary will be on the scale: £8,443-£7,951 per annum. (Range III of the national salary structure for University Research Workers) which is equivalent to the salary scale of a Senior Lecturer. The appointment will be for four years.

Further particulars of this appointment may be obtained from the Assistant Registrar (Personnel), University College of North Wales, Bangor, Gwynedd LL57 2DG, and applications (two copies) giving details of age, education and experience together with the names and addresses of three referees, should be sent to reach him not later than 25th June, 1977.

WILFRID LAURIE UNIVERSITY Department of English Notice of Vacancy

Applications are invited from specialists in Renaissance Drama (including Shakespeare) and/or Seventeenth Century (preferably with an interest in Milton).

An appointment will be made of an associate or full professor, with rank and salary depending on qualifications. Successful experience in university teaching and substantial publication are essential. Since the appointment involves the possibility of election as chairman for a three-year term (renewable), administrative experience will be considered a definite asset.

Send letter of application and curriculum vitae to the Chairman of the Selection Committee, Department of English, Wilfrid Laurier University, 75 University Avenue West, Waterloo, Ontario N2L 3C5.

Apply before November 1, 1977. Duties will begin July 1, 1978.

IMPERIAL COLLEGE OF SCIENCE AND TECHNOLOGY INDUSTRIAL SOCIOLOGY UNIT

SENIOR LECTURESHIP

Applications are invited from social scientists (an engineering background would be an advantage) who would contribute to important new developments at Imperial College, concerned with teaching social science to engineers and scientists, and with inter-disciplinary research. Some research and/or industrial experience is desirable.

Salary on Senior Lecturer Scale 26,443 to £7,951 plus L.A. and U.S.S. benefits.

Further details may be obtained from Professor Doroth Wetherburn, Director of the Industrial Sociology Unit, Imperial College, London, S.W.7, to whom applications should be made not later than 30th June, 1977.

UNIVERSITY OF MANITOBA

HEAD of the DEPARTMENT OF CLASSICS

Applications and nominations are invited for the position of Head of the Department of Classics. The Department offers undergraduate programmes in Greek, Latin and Classical Studies, and some M.A. work in Latin and Greek language and literature.

Applicants should be established scholars with active research interests and a strong commitment to teaching. The successful candidate will hold a tenured position in the Department; the appointment will be for a term of 5 years, with the possibility of renewal. Salary will be commensurate with qualifications and experience. The appointee will take up his/her duties on July 1, 1978. Further particulars, including curriculum vitae, list of publications, and the names and addresses of three referees, should be sent to Dr. F. G. Stambrook, Chairman, Classics Headship Selection Committee, Physics Building, University of Manitoba, Winnipeg, Canada, R3T 2N6, and must be received by September 15, 1977.

UNIVERSITY OF MANITOBA

HEAD OF THE DEPARTMENT OF ENGLISH

The Department currently has 19 faculty members. The successful candidate will hold a tenured position in the Department. The Department is Headed by a member of the Faculty of Education with the following qualifications: a Ph.D. in English, a minimum of 10 years' experience in university teaching, and a minimum of 5 years' experience in administrative work. The appointee will be required to lecture at all levels and to initiate and supervise research within the Department.

Applications or nominations should be sent to Dr. F. G. Stambrook, Chairman, English Headship Selection Committee, Physics Building, University of Manitoba, Winnipeg, Canada R3T 2N6, and must be received by September 15, 1977.

JAMES COOK UNIVERSITY OF NORTH QUEENSLAND

Applications are invited for the following appointments:

LECTURER IN ELECTRICAL ENGINEERING

Applicants should have a special interest in the area of communications and particularly in antennas and microwaves. The possession of a higher degree and evidence of relevant practical experience or of fruitful co-operation with industry in the general area of radio, television, antenna design, etc., would be a distinct advantage. The appointee would be required to lecture at all levels and to initiate and supervise research within the Department.

Applications close 8th July, 1977.

LECTURER IN BEHAVIOURAL SCIENCES (Social Psychology)

Applicants should possess a Ph.D. degree in social psychology and have an interest in the development and teaching of statistics to undergraduates. They should also have research and teaching interests in other areas, such as personality and social policy. A broad acquaintance with the behavioural sciences so that they can contribute to the Department's activities.

Applications close 2nd September, 1977.

LECTURER/SENIOR LECTURER IN EDUCATION

Applicants will be involved in the development and teaching of a B.Ed. school experience program, and will conduct undergraduate and postgraduate courses in the field of curriculum theory and development. Candidates should have appropriate qualifications and experience in practice secondary teacher education or curriculum studies.

Information on conditions of appointment and application procedure available from the Association of Commonwealth Universities, 25 Gordon Square, London WC1H 0PF.

UNIVERSITY OF ZAMBIA

2 SENIOR ACCOUNTANTS/ACCOUNTANTS

In the Bureau's Department, tenable as soon as possible. Candidates should have a knowledge of Computer Data Processing, Budgetary Control and Management Accounting techniques. Appointees will be responsible for preparation and supervision of Payroll, Financial Records, including Final Accounts, Expansion and Control Accounts and other day to day business. Salary scale: K6,354 to K7,000 per annum (plus 10% gratuity).

The British Government may supplement salaries by £2,976 p.a. (after tax) for married appointees (plus a gratuity of £1,000 per annum). Single appointees (normally free of all tax and usually reviewed annually) will receive a 10% pension allowance and holiday pay. Family passages, superannuation, housing allowance, and provision of education allowances and holiday pay are also provided.

Further information concerning the above position, including details of application procedure, is available from the Registrar, University of Zambia, Lusaka, Zambia. Applications should be sent to the Registrar, University of Zambia, Lusaka, Zambia, and must be received not later than 30th June 1977.

UNIVERSITY OF MELBOURNE

CHAIR OF OBSTETRICS AND GYNAECOLOGY

Applications are invited for the Chair of Obstetrics and Gynaecology at the Royal Women's Hospital, Parkville, Melbourne. The appointee will be responsible for the teaching of Obstetrics and Gynaecology to medical students and for the supervision of the Registrar, University of Melbourne, Parkville, Victoria. The appointee will also be responsible for the supervision of the Registrar, University of Melbourne, Parkville, Victoria. The appointee will also be responsible for the supervision of the Registrar, University of Melbourne, Parkville, Victoria.

Further information concerning the above position, including details of application procedure, is available from the Registrar, University of Melbourne, Parkville, Victoria. Applications should be sent to the Registrar, University of Melbourne, Parkville, Victoria, and must be received not later than 30th June 1977.

UNIVERSITY OF ADELAIDE

CHAIR OF COMMERCE (Reference 7.3)

The Department of Commerce is one of the two departments of the Faculty of Economics at the University of Adelaide. The Department is currently seeking an outstanding scholar to take up the Chair of Commerce. The appointee will be responsible for the supervision of the Registrar, University of Adelaide, Adelaide, South Australia. The appointee will also be responsible for the supervision of the Registrar, University of Adelaide, Adelaide, South Australia.

Further information concerning the above position, including details of application procedure, is available from the Registrar, University of Adelaide, Adelaide, South Australia. Applications should be sent to the Registrar, University of Adelaide, Adelaide, South Australia, and must be received not later than 30th June 1977.

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Further information concerning the above position, including details of application procedure, is available from the Registrar, University of Adelaide, Adelaide, South Australia. Applications should be sent to the Registrar, University of Adelaide, Adelaide, South Australia, and must be received not later than 30th June 1977.

UNIVERSITY OF NAIROBI-KENYA

SENIOR LECTURESHIP IN MATHEMATICS

Applications are invited for a Senior Lectureship in Mathematics at the University of Nairobi-Kenya. The appointee will be responsible for the supervision of the Registrar, University of Nairobi-Kenya, Nairobi, Kenya. The appointee will also be responsible for the supervision of the Registrar, University of Nairobi-Kenya, Nairobi, Kenya.

Further information concerning the above position, including details of application procedure, is available from the Registrar, University of Nairobi-Kenya, Nairobi, Kenya. Applications should be sent to the Registrar, University of Nairobi-Kenya, Nairobi, Kenya, and must be received not later than 30th June 1977.

ABERYSTWYTH THE UNIVERSITY COLLEGE OF WALES

DEPARTMENT OF LAW

Applications are invited for the post of Lecturer in Law at the University of Wales, Aberystwyth. The appointee will be responsible for the supervision of the Registrar, University of Wales, Aberystwyth, Aberystwyth, Wales. The appointee will also be responsible for the supervision of the Registrar, University of Wales, Aberystwyth, Aberystwyth, Wales.

Further information concerning the above position, including details of application procedure, is available from the Registrar, University of Wales, Aberystwyth, Aberystwyth, Wales. Applications should be sent to the Registrar, University of Wales, Aberystwyth, Aberystwyth, Wales, and must be received not later than 30th June 1977.

UNIVERSITY OF BOTSWANA AND SWAZILAND

UNIVERSITY COLLEGE of Swaziland

Applications are invited for the post of Lecturer in Mathematics at the University College of Swaziland. The appointee will be responsible for the supervision of the Registrar, University of Botswana and Swaziland, Maseru, Botswana. The appointee will also be responsible for the supervision of the Registrar, University of Botswana and Swaziland, Maseru, Botswana.

Further information concerning the above position, including details of application procedure, is available from the Registrar, University of Botswana and Swaziland, Maseru, Botswana. Applications should be sent to the Registrar, University of Botswana and Swaziland, Maseru, Botswana, and must be received not later than 30th June 1977.

UNIVERSITY OF CAPE TOWN

LECTURER IN GEOLOGY

Applications are invited for the post of Lecturer in Geology at the University of Cape Town. The appointee will be responsible for the supervision of the Registrar, University of Cape Town, Cape Town, South Africa. The appointee will also be responsible for the supervision of the Registrar, University of Cape Town, Cape Town, South Africa.

Further information concerning the above position, including details of application procedure, is available from the Registrar, University of Cape Town, Cape Town, South Africa. Applications should be sent to the Registrar, University of Cape Town, Cape Town, South Africa, and must be received not later than 30th June 1977.

ABERYSTWYTH THE UNIVERSITY COLLEGE OF WALES

DEPARTMENT OF EDUCATION

Applications are invited for the post of Lecturer in Education at the University of Wales, Aberystwyth. The appointee will be responsible for the supervision of the Registrar, University of Wales, Aberystwyth, Aberystwyth, Wales. The appointee will also be responsible for the supervision of the Registrar, University of Wales, Aberystwyth, Aberystwyth, Wales.

Further information concerning the above position, including details of application procedure, is available from the Registrar, University of Wales, Aberystwyth, Aberystwyth, Wales. Applications should be sent to the Registrar, University of Wales, Aberystwyth, Aberystwyth, Wales, and must be received not later than 30th June 1977.

BANGOR UNIVERSITY COLLEGE OF NORTH WALES

SCHOOL OF PHYSICAL AND MOLECULAR SCIENCES

Applications are invited for the post of Lecturer in Physics at the University College of North Wales, Bangor. The appointee will be responsible for the supervision of the Registrar, University of North Wales, Bangor, North Wales. The appointee will also be responsible for the supervision of the Registrar, University of North Wales, Bangor, North Wales.

Further information concerning the above position, including details of application procedure, is available from the Registrar, University of North Wales, Bangor, North Wales. Applications should be sent to the Registrar, University of North Wales, Bangor, North Wales, and must be received not later than 30th June 1977.

ABERYSTWYTH THE UNIVERSITY COLLEGE OF WALES

Applications are invited for the post of Lecturer in Mathematics at the University of Wales, Aberystwyth. The appointee will be responsible for the supervision of the Registrar, University of Wales, Aberystwyth, Aberystwyth, Wales. The appointee will also be responsible for the supervision of the Registrar, University of Wales, Aberystwyth, Aberystwyth, Wales.

